

**XI. The group *Chrysochraontes*  
(Acrid.)**

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Mr. James A. G. Rehn recently published an interesting paper (Rehn, 1928) in which he described two new genera and made valuable suggestions as to the relationship of the genera and species, belonging to this group of *Acrididae*. Unfortunately this author has not had before him all of the Palaearctic species and therefore his generic assemblages are not quite complete and not always natural.

As I have studied representatives of all Palaearctic and Nearctic genera and of practically all species, I venture to offer here a review of Palaearctic species of the group.

**History of the group.**

The first species of the group has been described from Hungary by Ocskay in 1826 under the name *Gryllus brachypterus* (Ocskay, 1826, p. 406). Some years later, Germar described and figured another species of the group, viz. *Podisma dispar* (Germar, 1831-1835, pl. 7) and practically at the same time the first named author described under the name *Gryllus platypterus* a macropterous form of *dispar* (Ocskay, 1833, p. 960); as the exact time of the publishing of *Podisma dispar* is not known the determination of priority is impossible. In May of 1853 Fieber (Lotos, p. 118) included these two species in his new genus *Chorthippus* but as they differ from other species of this genus he separated *dispar* and *ocskayi* (= *brachypterus*) into a special group, i. e. subgenus, *Euthystira(e)*, the same name has been published by Fieber in 1852 (Kelch, p. 2) but in incorrect form,



obviously due to printer's error *Euthyteirae* (sic !). Soon afterwards Fischer (September 1853) published for the same two species the generic name *Chrysochraon*; both Fieber and Fischer did not fix the actual type of their two (sub)genera and only in 1910 Kirby established *dispar* as the genotype of *Chrysochraon*. For a long time only *dispar* and *brachypterus* were known from Palaearctic region. In 1841 Harris described from North America another (sub)genus and species, viz. *Locusta* (*Chloëaltis*) *conspersa* and in 1873 Thomas made known a second Nearctic species of the group *Chrysochraon abdominalis*. Later on, almost all authors included two Palaearctic species in the genus *Chrysochraon* and the Nearctic ones in *Chloëaltis*.

Near the end of 19th century Bolivar and McNeill made known the following forms: the former author *Chrysochraon brachypterus* var. *intermedia* from Spain (1897) and *Ch. japonicus* from Japan (1898) and the second author described from N. America a third genus *Napaia* with a new species *N. gracilis* (1897, p. 196). In 1900 Zubovsky described from the Altai Mountains a new species, forming a new subgenus within the genus *Chrysochraon*, which he called *Podismopsis altaica*. Six years later, Miram described from Northern Russia and Siberia a new species *Chrysochraon poppiusi* (1906, p. 3); this species was also referred to by Ikonnikov (1911<sup>1</sup>, p. 97) to *Podismopsis*, separated by the same author from *Chrysochraon* as a distinct genus. In another paper, published also in 1911 Ikonnikov described from Ussury region two more new species of the genus *Podismopsis*, called by him *P. ussuriensis* and *P. gynaemorpha* (1911<sup>2</sup>, pp. 246-247). About the same time but somewhat earlier Shiraki described from Saghalien *Chrysochraon genicularibus* (1910, p. 17) which is however a member of the *Podismopsis* group. Uvarov in 1914 made known from Manchuria and Transbaikalia his *Ch. vittatus* (1917, p. 168) and in 1925 *Ch. dispar* sbsp. *major* from Turkestan (1925, p. 260). On the other hand Caudell in 1921 described from China *Chrysochraon anomopterus*, Miram in 1928 *Podismopsis jakuta* (1928, p. 11) and Dirsh described his *Ch. dispar orientalis* from Ussury region (1929, p. 223) which is a pure synonym of *Ch. dispar*. Moreover Ramme has just described from Montenegro *Podismopsis relictta* (1931, p. 123).

From the Nearctic region only a single species of the group was described, viz. *Chloëaltis aspasma* Rehn and Hebard (1919, p. 82).



Finally Rehn in 1928 published a review of the group *Chrysochraontes* in which he described two new genera *Mongolotettix* for *Ch. japonicus* (genotype) and *Ch. anomopterus* Caudell, and *Eogeacris* for *Ch. brachypterus*. On the other hand the same author extended the genus *Chrysochraon* and included in it *Podismopsis poppiusi* and *Chloëaltis abdominalis*; while he referred *Chloëaltis aspasma* to the genus *Napaia*.

After a study of representatives of all genera I established the following generic and subgeneric names and the classification of species.

Genus *Chrysochraon* Fisch. (genotype *Ch. dispar* Germ.) with only two subspecies (Palearctic).

Genus *Neopodismopsis* nov. for N. American *Ch. abdominalis* Th.

Genus *Podismopsis* Zub. with three subgenera: *Eurasiobia* subg. n. (type *P. poppiusi*) for five Palearctic species, *Podismacris* subg. n. for two species and one subspecies with *P. ussuriensis* Ikon. as its genotype and *Podismopsis* s. str. for only one species *P. altaica* Zub.

Genus *Euthystira* Fieb. (= *Eogeacris* Rehn) for one species with two subspecies (genotype *Ch. brachypterus* Ocsk.)

Genus *Mongolotettix* Rehn (genotype *Ch. japonicus*) with one species and two subspecies (Palearctic).

Genus *Chloëaltis* Harris with only one Nearctic species, viz. *Ch. conspersa* Harris.

Genus *Napaia* McNeill (genotype *N. gracilis* McNeill) with two Nearctic species.

Thus, at the present time, the group *Chrysochraontes* as found in Palearctic and Nearctic regions, includes 7 genera and 20 species and races most of which are Palearctic or, more exactly, North Asiatic in their distribution. Only three genera, viz. *Chloëaltis* Harris, *Neopodismopsis* B.-Bienko and *Napaia* McNeill are restricted to North America; the genera *Chrysochraon* Fisch., *Podismopsis* Zub., *Euthystira* Fieb. and *Mongolotettix* Rehn are known only from Palearctic region.

#### Material studied.

Although the group *Chrysochraontes* is relatively rich in species and subspecies, the specimens studied by me are represented in the collections not by large series, except the most common *Chrysochraon*



*dispar* Germ. and *Euthystira brachyptera* Ocsk. I have been able to study over 500 specimens from different countries. The most interesting collection, including some types, belongs to the Zoological Museum of the Academy of Sciences in Leningrad. I have also received many specimens of the genus *Podismopsis* from my friend Mr. S. P. Tarbinsky and a series of the same genus and *Mongolotettix* from Mr. Th. K. Lukjanowitsh. Further I have worked out a collection of the Institute of Plant Protection, Leningrad. Mr. H. Furukawa, Tokyo, has kindly sent to me one pair of the very interesting *Chrysochraon genicularibus* Shiraki from Saghalien. Mr. B. S. Kuzin, Zoological Museum of the Moscow University, has also kindly sent for me two interesting specimens (type and paratype) of Ikonnikov's *Podismopsis gynaeomorpha*. The valuable type and one paratypic specimen of *Ch. brachypterus* var. *intermedia* Bol. were obtained for me by Mr. B. P. Uvarov through the kindness of Prof. Cándido Bolívar, Madrid, from the collection of Prof. Ignacio Bolívar. Prof. Dr. W. Ramme, Berlin, has kindly sent to me for study the type and paratype of his extremely interesting *Podismopsis relictæ*, just described from Montenegro. Some specimens of North American representatives of the group were placed at my disposal by Mr. Morgan Hebard, Philadelphia, and Prof. Albert P. Morse, Wellesley; these specimens were compared with Palaearctic forms and without this comparison the study would be impossible. At least my own collection contains some interesting specimens of the group taken by myself in the Altai Mountains and by some other collectors in Central and Eastern Siberia and in Manchuria.

For the privilege to work out the materials I am greatly obliged to the authorities of the Zoological Museum of the Academy of Sciences in Leningrad, especially to the curator of the Orthoptera in that Museum Miss E. Miram. My cordial thanks are due to the above named persons, and especially to Mr. B. P. Uvarov for their kind assistance.

#### **Systematic position of the group and its geographical distribution.**

The genera mentioned above, form within the subfamily *Acridinae* a group called by authors *Chrysochraontes* and distributed only in Palaearctic and Nearctic regions. This group is unquestionably of



Angaran origine as it is fully represented in Siberia and in adjacent regions and therefore some tropical genera, as *Leva* Bol. and others included by Bolívar (1914) in the group do not belong to *Chrysochraontes*. The group in general is phytophilous in its behaviour, populating swampy meadows with a rich vegetation and it is quite probable that phytophilous habit in the group is of primary origin; the largest part of the group is distributed in Eastern and Far Eastern Siberia characterised by very rich vegetation.

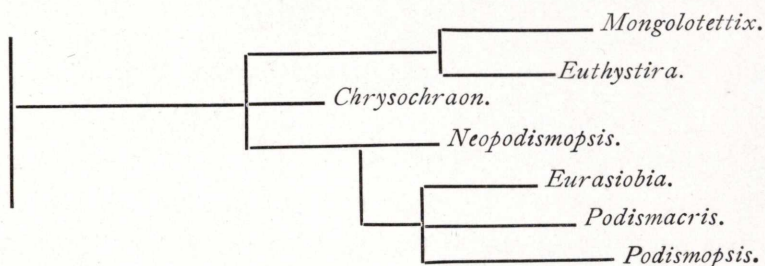
As we know phytophilous *Acrididae*, populating the humid and dense plant associations, are characterised by very elongated and graceful body, with strongly oblique face, often by more or less ensiform antennae, by parallel lateral keels of the pronotum and in general by more or less abbreviated elytra and wings. If representatives of the genus *Chrysochraon* are compared with those of *Podismopsis*, we see that the former is characterised by more «phytophilous» general habitus than the later.

The probable ancestor of the group should be characterised by features like those in *Chrysochraon*. On the other hand *Podismopsis* s. str. differs strongly from *Chrysochraon* by very heavy general habitus, less oblique face, incurved lateral keels of the pronotum and by small arolia between claws. Between these two «phytophilous» and «geophilous» forms there are very regular transitions. The genus *Neopodismopsis* is the most primitive within the section of the group characterised by incurved lateral keels of the pronotum but at the same time similar to *Chrysochraon* in some features, as follows: rounded on the apex male elytra which in other genera are obliquely-truncate, more developed female elytra and not excised hind margin of the pronotum; the subgenus *Eurasiobia* of *Podismopsis* is intermediate between *Neopodismopsis* and *Podismopsis* s. str. although closely related to the later and differing from it not more than subgenerically. The species of the subgenera *Eurasiobia* and *Podismopsis* lay their eggs in the ground; I observed the oviposition of *P. altaica* in the Altai Mountains and Berezchkov [1926, p. 213] proved that *P. (Eurasiobia) poppiusi* lay their egg-pods in the ground. On the contrary *Chrysochraon dispar* lay eggs in the hollow stems of plants, in the bark of dead trees and in similar places [Birula, 1898; Shapinsky, 1923; Ramme, 1926]; it is probable that oviposition habits in *Chrysochraon*



are more primitive in the group than those in *Podismopsis*. Thus, the section with *Neopodismopsis* and *Podismopsis* develops mainly in the direction of geophilous or semi-geophilous habits as can be seen in the most specialised *P. altaica*. The genera *Euthystira* and *Mongolotettix* are also more specialised than *Chrysochraon* as shown by the structure of the ovipositor, but they are characterised by the same ecology and oviposition habits (see investigation of this question in *E. brachyptera* by Maltzev, 1924; oviposition habit of *Mongolotettix* is unknown but with all probability it does not differ from those in *E. brachyptera*). Thus, this entirely phytophilous section of the group develops in the phytophilous direction and is still more characterised by phytophilous adaptation than the most primitive *Chrysochraon*.

The relationship of the genera (excepting *Napaia* and *Chloëaltis*) may be demonstrated by the following diagram:



The upper (*Mongolotettix* and *Euthystira*) and lower (*Neopodismopsis* and three subgenera of *Podismopsis*) genera form parallel and analogous branches of the central stock with *Chrysochraon*. The genera *Mongolotettix* and *Euthystira* are developed in the direction of elongation of the female ovipositor, do not change their more primitive phytophilous habits and are more specialised for such habits than *Chrysochraon*, as shows the structure of the female ovipositor; the genus *Podismopsis* with three subgenera is developed, on the contrary, in the direction of geophilous habits and is less associated with vegetation than *Chrysochraon* or other genera because some species [*P. (E.) poppiusi*, *P. (P.) altaica* and very probably others] lay eggs in the ground.

The present known distribution of the Palaearctic species of the group is shown in the separate table (see p. 49). The majority of the species is distributed in Far Eastern Siberia, i. e. in the regions







with fully developed large forest areas (taiga) with very rich, swampy plant associations. This region is characterised by a relic, Tertiary, fauna and flora and it is very probable that the native biocoenosis of the group is «taiga». As stated by P. P. Sushkin (1925) this biocoenosis is probably originated on Beringia, i. e. the North Pacific land connection between E. Asia and N. America, and therefore the prevalence of species in the Far East is natural.

The largest area of the distribution belongs to the genera *Chrysochraon* and *Euthystira*, occupying practically the whole Europe, Caucasus, Turkestan and Siberia from the Ural Mountains to the Ussury region. The genus *Podismopsis* is also characterised by relatively large area, occupying Palaearctic region from the alpine zone of Montenegro, polar and subpolar European Russia to Yakutia and Saghalien, but only the subgenus *Eurasiobia* has the large area; the areas of two other subgenera, specially of *Podismacris* are considerably smaller and show the more recent separation of these subgenera from more primitive subgenus *Eurasiobia*. The genus *Mongolotettix* is distributed from Central Siberia (Minusinsk) to South Japan and China.

### Key to genera and subgenera.

- 1 (16). Foveolae of the vertex quite absent.
- 2 (15). Elytra with a sparse longitudinal venation; in ♂ with only one distinct intercalate vein in mediastinal area and without false vein in discoidal area; elytra in ♀ with not more than 10 longitudinal veins.
- 3 (5). More slender. Antennae depressed, dilated at the base, specially in ♀. Lateral keels of the pronotum quite straight and parallel or faintly divergent in metazona but never roundly incurved. Mesosternal interspace elongated, or sometimes quadrate in ♀. Genicular lobes of hind femora acutely angulate at the apex, or somewhat rounded but forming an angle less than 90°.
- 4 (12). Lateral keels of the pronotum sharp, not less distinct than the median keel. Elytra in ♂ rounded at the apex, not inflated, in ♀ strongly pointed at the apex and almost touching each other above. Valvae of the ovipositor short and robust; upper valvae incurved, with a strong roundly-rectangular excision..... I. **Chrysochraon** Fisch.
- 5 (3). More robust. Antennae quite filiform or slightly depressed but never dilated at the base. Lateral keels of the pronotum distinctly roundly incurved, not parallel at least in ♀. Mesosternal interspace trans-



- verse, or sometimes quadrate in ♂. Genicular lobes of hind femora broadly rounded at the apex or forming an angle more than 90°.
- 6 (7). Elytra in ♂ broadly rounded at the apex; in ♀ touching each other above, with a distinct, not dense, longitudinal venation. Hind margin of the pronotum rounded, without a median excision . . . . .
- II. **Neopodismopsis** gen. n.
- 7 (6). Elytra in ♂ obliquely truncate or obliquely excised at the apex, never broadly rounded; in ♀ not touching each other above, with dense longitudinal veins. Hind margin of the pronotum truncate or with a distinct median excision, especially in ♀.. III. **Podismopsis** Zub.
- 8 (11). Vertex horizontal, at least in ♀. Frontal ridge in ♂ with more or less distinct sulcus. Supplementary facial carinae well developed, distinct. Arolium between claws large; hind arolia practically as long as the claws.
- 9 (10). Ovipositor short and robust; dorsal surface of the upper valvae not straight, incurved, with a distinct rounded excision . . . . .
- A. **Eurasiobia** subg. n.
- 10 (9). Ovipositor long and slender; upper valvae not or very feebly incurved, without a dorsal excision on the upper surface . . . . .
- B. **Podismacris** subg. n.
- 11 (8). Vertex strongly sloping. Frontal ridge quite flat, even in ♂, except a very feeble depression about the middle ocellus. Supplementary facial carinae feeble or quite absent, especially in ♀. Arolium between claws small, not longer than half of a claw.. C. **Podismopsis** s. str.
- 12 (4). Lateral keels of the pronotum not sharp, less developed than the median keel. Elytra in ♂ inflated, obliquely truncate or obliquely excised at the apex, in ♀ quite lateral, oval, not pointed at the apex. Valvae of the ovipositor long and slender; upper pair not incurved and not roundly excised on their dorsal surface.
- 13 (14). Antennae in ♀ not ensiform, only faintly dilated at the base. Lateral keels of the pronotum well developed on their whole length. Elytra in ♂ with not quite regular transverse veinlets; cells not rectangular. Hind metatarsus longer than third tarsal joint . . . . .
- IV. **Euthystira** Fieb.
- 14 (13). Antennae in ♀ quite ensiform. Lateral keels of the pronotum in metazona less developed than in prozona, subobliterate or absent. Elytra in ♂ with very regular transverse veinlets, forming rectangular or quadrate cells. Hind metatarsus not longer than third tarsal joint . . . . .
- V. **Mongolotettix** Rehn.
- 15 (2). Elytra with a dense longitudinal venation, in ♂ with three distinct intercalate veins in mediastinal area and with a false vein in discoidal area, in ♀ with not less than 15 longitudinal veins . . . . .
- VI. **Chloëaltis** Harris.
- 16 (1). Foveolae of the vertex distinct . . . . . VII. **Napaia** McNeill.



I. Genus **Chrysochraon** Fisch.

- 1831-35. *Podisma* Germar, Fauna Ins. Europae, fasc. 17, pl. 7 (partim).  
 1833. *Gryllus* Ocskay, Nov. Acta Acad. Leop. Carol., xiv (2), p. 960 (partim).  
 1853. *Euthystira(e)* Fieber, Lotos, III, p. 118, Mai (subgeneric name for *Chorthippus dispar* Germ. and *Ch. ocskayi* = *brachypterus*) (partim).  
 1853. *Chrysochraon* Fischer, Orth. Europ., pp. 296, 307.  
 1910. *Chrysochraon* Kirby, Syn. Cat. Orth., III, p. 145 (partim).  
 1928. *Chrysochraon* Rehn, Proc. Acad. Nat. Sc. Philad., LXXX, p. 196 (partim).

Body slender, with strongly reclinate face in ♂. Vertex prominent, horizontal, rounded at the apex and forming an acute-rounded angle with the face; foveolae absent; frontal costa strongly sulcate in ♂; supplementary facial carinae well developed, acute in ♂; eyes moderately elongated, but feebly acute above; antennae not ensiform but distinctly depressed and somewhat widened at the base, specially in ♀. Pronotum never subcylindrical, with flat disc and quite vertical lateral lobes, forming an angle near 90° with the disc; lateral keels distinct on their whole length, sharp, as distinct as the median keel, straight and parallel or somewhat divergent in metazona; hind margin rounded, without a median excision. Elytra in ♂ on the apex broadly rounded, and not obliquely-truncate or excised; mediastinal area not or scarcely reaching the middle part of elytra, with a single intercalary vein and without median vein in discoidal area; elytra in ♀ abbreviated, not quite lateral, contiguous or very approximated above, strongly pointed at the apex, with a strong preapical excision; venation not dense, without false veins, except the mediastinal area. Interspace between mesosternal lobes elongated or subquadrate in ♂

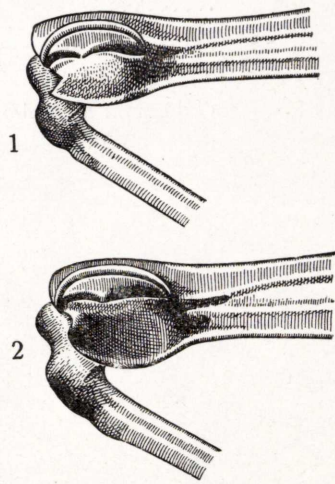


Fig. 1.—*Chrysochraon dispar dispar* (Germ.).—Lateral view on the outer side of hind knee of ♂;  $\times 10$ .  
 Fig. 2.—*Podismopsis (Eurasibobia* sbg. n.) *poppiusi* (Miram).—Lateral view on the outer side of hind knee of ♂;  $\times 10$ .



and quadrate in ♀; interspace between metasternal lobes quadrate or narrow. Hind femora slender; genicular lobes acutely-angulate on the apex or forming a rounded angle less than 90°. Ovipositor short and robust, with incurved upper pair of valvae, with a strong round-triangular excision. All arolia between claws strongly developed, as long as, or longer than, claws.

Genotype: *Chrysochraon dispar dispar* (Germ.)

The genus *Chrysochraon* as now limited, include only two subspecies, viz. more northern transpalaeartic *Ch. dispar dispar* Germ. and Eremian *Ch. dispar major* Uv. All other species included into *Chrysochraon* by previous authors are not congeneric and belong to *Podismopsis*, *Neopodismopsis*, *Euthystira* or *Mongolotettix*.

#### Key to subspecies.

- 1 (2). Smaller and more slender (length of body ♂, 17-19; ♀, 22-26; of hind femora ♂, 11-12; ♀, 13-15.5 mm.) Fastigium of the vertex in ♀ quite horizontal, rectangular at the apex... 1. **Ch. dispar dispar** (Germ.)
- 2 (1). Larger and more robust (length of body ♂, 21-24; ♀, 32-38; of hind femora ♂, 13-14; ♀, 17-18 mm.) Fastigium of the vertex in ♀ sloping, broadly rounded at the apex..... 2. **Ch. dispar major** Uv.

#### 1. *Chrysochraon dispar dispar* (Germ.)

(Fig. 1.)

- 1831-35. *Podisma dispar* Germar, Fauna Ins. Europ., 17, pl. 7.  
 1833. *Gryllus platypterus* Ocskay, Nova Acta Acad. Leop. Car., xiv (2), p. 960 (forma macroptera).  
 1853. *Chorthippus dispar* Fieber, Lotos, III, p. 118. Mai.  
 1853. *Chrysochraon dispar* Fischer, Orth. Europ., p. 308, pl. XVI, fig. 6.  
 1883. *Chrysochraon dispar* Brunner v. Wattenwyl, Prodr. Europ. Orthopt., p. 98, pl. 4, figs. 27 A-D.  
 1910. *Chrysochraon dispar* Kirby, Syn. Cat. Orth., III, p. 145.  
 1928. *Chrysochraon dispar* Rehn, Proc. Acad. Nat. Sc. Philad., LXXX, p. 196.

♂. Antennae nearly twice as long as the head and pronotum together; fastigium of the vertex a little broader than long. Metazona of pronotum a little longer than prozona, feebly but distinctly rugu-



lose; lateral lobes rugulose behind typical sulcus. Elytra somewhat abbreviate, not reaching the apex of hind femora or, rarely, extending far beyond the apex of hind femora; scapular area broad, with regular transverse veinlets, twice as broad as externomedian area, pellucid; discoidal area parallel-sided, with more or less regular quadrate cells; first radial vein regularly incurved on its whole length, second vein practically straight, except somewhat incurved apex, and the third well developed, reaching the apex of elytra, more or less straight; first ulnar vein often irregular and disappearing near the apex of elytra; inter-ulnar area as broad near the middle of elytra, as the adjacent part of discoidal area; apical third of the elytra with a spot of irregular and dense veinlets. Arolium between claws not very broad. Cerci nearly half as long as the subgenital plate; the latter long, strongly conically produced.

♀. Larger and more clumsy. Antennae as long as the head and pronotum together; fastigium of the vertex quite horizontal, with rectangular apex. Elytra extending to the apex of the second abdominal tergite, with straight radial and first ulnar veins.

Coloration brownish-olivaceous or dirty-yellowish-green in ♂, and brownish-grey or greyish in ♀. Interspace between the margins of the fastigium of the vertex and the basal part of antennae never blackened. Elytra unicolorous, in ♂ hyaline, shining as glass. Hind femora in ♂ pale-yellowish inside and below, in ♀ dark-red below and reddish on the lower part of the inner side; inner dark longitudinal stripe absent. Hind tibiae pale-yellowish in ♂ and dark-red in ♀; spines with darkened apices; knee part of hind legs partly darkened.

	♂♂		♀♀	
Length of body .....	17-19	mm.	22-26	mm.
— of pronotum .....	3	—	4.5-5	—
— of elytra .....	9-11 (15)	—	6.5-7 (19)	—
— of hind femora .....	11-12	—	13-15.5	—

GEOGRAPHICAL DISTRIBUTION.—The largest part of W. Europe from France to northern part of Balkan peninsula, Roumelia, Poland, Finland, Kanin peninsula, North West, Central and South European Russia, Ukraine, Crimea, Northern Caucasus and E. Ciscaucasia, Ural



Mountains, Kazakstan from the river Ural to Irtish, Semiretshye (not quite typical form), Zaisan region, W. Siberia up to 57° N, Altai Mountains, southern part of Central and Eastern Siberia from Minusinsk district to Khabarovsk in the Ussury region.

This species was described by Germar and Ocskay during the period from 1831 to 1835. The paper by the last mentioned author was published in 1833 (not in 1832 as indicated on the paper) but the exact time on the printing of Germar's paper is unknown; it is only definitely known that it was published between 1831 and 1835. As the Germar's name is better known I prefer to retain it for this species.

SPECIMENS EXAMINED.—About two hundred, from different localities of European Russia and Siberia; the most interesting records are, as follows.

*Northern Caucasus*.—Piatigorsk, VIII.1927, 1 ♂, 2 ♀ ♀.

*Eastern Siberia*.—Sretensk, Transbaikalia, 1 ♀.

*Russian Far East*.—Khabarovsk, North Ussury region, VII.1927, 1 ♂. (atypical *Ch. dispar dispar*, resembling somewhat *Ch. dispar major* Uv.)

## 2. *Chrysochraon dispar major* Uvarov.

1914. *Chrysochraon dispar* Uvarov, Rev. Russe d'Ent., xiv, p. 224 [Aulie-Ata (Uzbekistan)] (not Germar).  
 1925. *Chrysochraon dispar major* Uvarov, Journ. Bomb. Nat. Hist. Soc., xxx, p. 260 [♂, ♀; Khumsan, district Tashkent, Uzbekistan].  
 1929. *Chrysochraon dispar major* Olsufjev, Rep. Appl. Ent., iv, p. 277 [Alexandro-Newaskaia, district Kisliar (Eastern Ciscaucasia)].  
 1929. *Chrysochraon dispar orientalis* Dirsh, Trav. Mus. Zool. Acad. Sc. Ukraine, p. 223 [♀; Kuldur, district Amursky; Stsherbakovka, river Pkhusun, Ussury region] (*syn. nov.*)

Very like in general habitus and in coloration to typical form but differs from it in larger dimensions, more robust body and in somewhat sloping female fastigium of the vertex which is broadly rounded at the apex.

	♂	♀
Length of body .....	21 -24 mm.	32-38 mm.
— of pronotum.....	4 —	6 —
— of elytra.....	13.5-14.5 —	10-11 —
— of hind femora.....	13 -14 —	17-18 —



Dirsh's *Ch. dispar orientalis* is a pure synonym of *Ch. dispar major* as show the study of the types of both insects.

GEOGRAPHICAL DISTRIBUTION.—Known only from Tashkent district and Aulie-Ata, Turkestan (more exactly Uzbekistan) (Uvarov's record of *Ch. dispar* from Aulie-Ata also belongs to subsp. *major*, because the author mentioned that his specimens from that country had very large dimension) Russian Far East and from Eastern Ciscaucasia, but probably widely distributed in Turkestan and adjacent regions. In Semiretshye we have the connection of the areas of these two subspecies.

Specimen examined: 15; 8 ♂♂, 7 ♀♀.

Typical *Ch. dispar major* Uv.:

*Uzbekistan*.—Khumsan, distr. Tashkent, 9.VIII.1920, 1 ♂ and 1 ♀ (type and paratype).

*Eastern Ciscaucasia*.—Alexandro-Newaskaia, distr. Kizliar, 2 ♂♂, 2 ♀♀ (N. Olsufjev); Vyshe-Talovskaia, 15-16.VII.1930, 3 ♂♂, 2 ♀♀ (G. Bey-Bienko); Parabotsh, district Kizliar, 12.VII.1927, 1 ♂ (A. N. Kiritschenko).

*Russian Far East*.—Kuldur, district Amursky, 20.VII.1928, 2 ♀♀ (G. Kotshubey) (type and paratype of *Ch. dispar orientalis* Dirsch); Stsherbaxovka, Ussury region, 16.VII.1928, 1 ♀ (A. Kistjakovsky) (paratype).

Intermediate between *Ch. dispar dispar* and *Ch. dispar major*:

*Semiretshye*.—Alma-Ata (form. Verny), 5.VIII.1923, 1 ♂, 1 ♀.

## II. Genus **Neopodismopsis** nov.

1873. *Chrysochraon* Thomas, Syn. Acrid. N. Amer., p. 74 (nec Fischer).

1910. *Chloëaltis* Kirby, Syn. Cat. Orthopt., III, p. 126 (partim).

1928. *Chrysochraon* Rehn, Proc. Acad. Nat. Sc. Philad., pp. 196-198 (partim).

Body relatively robust for the group. Foveolae of the vertex absent; fastigium of the vertex not strongly sloping, horizontal or feebly reclinate; face, seen in profile moderately sloping, not roundly produced, practically straight; frontal costa distinctly sulcate; supplemen-



tary facial carinae well developed; eyes elongate-ovoid, moderately acute above; antennae in ♂ longer than, in ♀ as long as, the head and pronotum taken together, not ensiform, in ♀ moniliform. Lateral keels of the pronotum not strongly but distinctly incurved in prozona, practically straight and feebly divergent in metazona; hind margin of the pronotum rounded, without a median emargination. Elytra in ♂ not obliquely truncate on the apex, broadly rounded, not inflated; in ♀ elongated, but not pointed at the apex, contiguous above, with a distinct and sparse longitudinal venation. Interspace between mesosternal lobes as in subgenus *Eurasiobia* of the genus *Podismopsis*, i. e. subquadrate in ♂ and transverse in ♀. Arolium between claws strong, practically as long as the claws. Subgenital plate in ♂ obtuse-conically produced, moderately elongated. Ovipositor in ♀ short and robust, with incurved valvae; dorsal surface of the upper pair with a strong rounded excision.

Genotype: *Chrysochraon abdominalis* (Thomas).

This genus is characterised by some features like those of the genus *Chrysochraon* but is unquestionably more related to the species of the genus *Podismopsis* s. lato, especially to subgenus *Eurasiobia*. Rehn recently included *N. abdominalis* in the genus *Chrysochraon* but it is quite evident that the species is strongly divergent from the primitive ancestral stock as shown by the structure of antennae, pronotum and hind femora.

The genus is monotypic and represented by North American *N. abdominalis* (Thomas).

#### 1. *Neopodismopsis abdominalis* (Thomas).

- 1873. *Chrysochraon abdominalis* Thomas, Syn. Acrididae North Amer., pp. 74-75 [♀; Montana].
- 1910. *C(hloëaltis) abdominalis* Kirby, Syn. Cat. Orth., III, p. 126.
- 1928. *Chrysochraon abdominalis* Rehn, Proc. Acad. Nat. Sc. Philad., LXXX, p. 197.

According to Hebard (1928) this species is local and relatively scarce in its distribution and known at present from Ontario, Michigan, Minnesota, North and South Dakotas, Manitoba, Saskatchewan, Alberta, British Columbia and Rocky Mountains to Sacramento Mountains in New Mexico.



Specimens examined, 3; 1 ♂, 2 ♀ ♀.

*British Columbia*.—Chilcotin, 8-9.VIII.1920, 1 ♂, 2 ♀ ♀ (E. R. Buckell).

### III. Genus **Podismopsis** Zub.

1900. *Podismopsis* Zubovsky, Horae Soc. Ent. Ross., xxxiv, p. 2 [genotype *P. altaica* Zub. (by monotypy)].

1910. *Podismopsis* Kirby, Syn. Cat. Orth., iii, p. 147.

1928. *Podismopsis* Rehn, Proc. Acad. Nat. Sc. Philad., p. 195.

Body variable in general habitus from relatively slender to very robust. Antennae quite filiform; foveolae of the vertex absent; face from moderately reclinate to subvertical. Pronotum with more or less incurved lateral keels, at least in ♀; hind margin with a distinct median excision, especially in ♀, or truncate but never rounded; lateral keels strong along their whole length, as developed as the median keel. Mesosternal interspace transverse or sometimes quadrate in ♂. Elytra in ♂ often inflated, with not rounded, obliquely truncate or obliquely excised apex, in ♀ lobiform, lateral, not contiguous above; venation normal in ♂, with only one intercalary vein in mediastinal area, in ♀ with not more than 10 longitudinal veins. Subgenital plate in ♂ very variable in different subgenera and species. Genicular lobes of hind femora rounded at the apex or forming an angle more than 90°.

Genotype: *Podismopsis altaica* Zub.

This is the richest genus within the group, forming three distinct subgenera: *Eurasiobia* subg. n., *Podismacris* subg. n. and *Podismopsis* s. str.

#### A. Subgenus **Eurasiobia** nov.

1906. *Chrysochraon* Miram, Öfv. Finska Vet. Soc. Förh., xlix, n. 6, p. 3.

1910. *Chrysochraon* Kirby, Syn. Cat. Orth., iii, pp. 145-146 (partim).

1928. *Chrysochraon* Rehn, Proc. Acad. Nat. Sc. Philad., p. 197 (partim).

Vertex horizontal, at least in ♀ or only faintly sloping; supplementary facial carinae well developed in ♂ or not strong but more or less distinct in ♀; eyes elongate-ovoid or semicircular. Face moderately reclinate. Pronotum not constricted, with elongated disc; late-



ral keels in ♂ moderately or sometimes feebly incurved, in ♀ always distinctly incurved; hind margin never rounded, with a median excision in ♀, truncate in ♂ or with a feeble excision as in ♀. Elytra in ♂ with irregular and often asymmetrical venation, obliquely-truncate on the apex, more or less inflated; elytra in ♀ not touching above, more or less broad, with dense and not quite distinct longitudinal venation. Interspace between mesosternal lobes transverse, in ♂ less than twice, in ♀ less than two and half times, as broad as long; rarely in ♂ interspace is quadrate. Arolium between claws well developed, practically as long as the claws. Ovipositor short and robust; dorsal surface of the incurved upper pair with a distinct, rounded excision.

Type: *Chrysochraon poppiusi* Miram..

This subgenus includes at present 5 species and subspecies, 4 of which are distributed in Siberia and adjacent regions and only a single species, viz. *P. (Ch.) poppiusi*, is known also from polar and subpolar European Russia. The type of this subgenus was included recently by Rehn (1928) in the genus *Chrysochraon* but it is evident that this species is more related to the genotype of the genus *Podismopsis* than to the same of *Chrysochraon*, as some features indicated by Rehn for the separation of *Podismopsis* from *poppiusi* (structure of the ovipositor, absence of supplementary facial carinae and others) are not constant and not valid.

#### Key to species and subspecies.

- 1 (8). Smaller. Elytra in ♂ not separated along their anal margins, reaching the apex of abdomen, or distinctly extending beyond the middle of the same; elytra in ♀ somewhat acute or rectangular on the apex, distinctly longer than broad.
- 2 (3). Body elongated, more slender. Pronotum in ♂ with subparallel lateral keels, with elongated lateral lobes. Elytra in ♀ distinctly broader than hind femora. Subgenital plate in ♂ long, narrowly-conical, as long as the widest part of hind femora. The later in ♀ very slender and long..... **P. (E.) genicularibus** (Shiraki).
- 3 (2). Body more robust, less elongated. Pronotum in ♂ with more or less incurved lateral keels; lateral lobes not longer than their vertical depth. Elytra in ♀ as broad as, or narrower than the widest part of hind femora. Subgenital plate in ♂ shortly-conical, shorter than basal width of hind femora. The later in ♀ shorter and robust.
- 4 (7). Antennae long, in ♂ half again or more, in ♀ longer than the head and pronotum taken together; middle joints longer than broad. Elytra



- in ♂ broad; apical truncation strong, practically transverse; scapular area feebly and regularly narrowed to the apex. Interspace between mesosternal lobes in ♀ less than two and half times as broad as long.
- 5 (6). Frontal ridge reaching the clypeus, with parallel or feebly divergent keels. Elytra in ♂ moderately broad, feebly shining; scapular area less than two and half times as broad as the interradiar area; elytra in ♀ with practically straight radial veins. Hind femora shorter....
- ..... 2. **P. (E.) poppiusi** Miram.
- 6 (5). Frontal ridge subobliterate below middle ocellum and quite absent near the clypeus, strongly divergent downwards. Elytra in ♂ very broad, strongly shining; scapular area two and half times or more as broad as interradiar area; elytra in ♀ with distinctly incurved radial veins. Hind femora relatively longer..... 3. **P. (E.) jacuta** Miram.
- 7 (4). Antennae in ♂ not long, in ♀ shorter than the head and pronotum taken together; middle joints not longer than broad. Elytra in ♂ narrow; apical truncation very oblique; scapular area strongly narrowed apically. Mesosternal interspace in ♀ two and half times as broad as long..... 4. **P. (E.) relictata** Ramme.
- 8 (1). Larger. Elytra in ♂ separated along their anal margins, only reaching or scarcely extending beyond the middle of abdomen; the later is thick, as in ♀ of other species. Elytra in ♀ not longer than broad, obtusely rounded at the apex.... 5. **P. (E.) gynaemorphia** Ikonn.

1. **Podismopsis (Eurasiobia) genicularibus** (Shir.)

(Figs. 3-5.)

1910. *Chrysochraon genicularibus* Shiraki, Acrid. Japans, p. 16 [♂; Sapporo, Northern Japan; Saghalien].
1929. *Chrysochraon genicularibus* Furukawa, The Entomologist, LXIII, pp. 249-251, pl. V, figs. 1-2 [♀; South Saghalien; Kurile Islands].

♂. The most slender species of the genus *Podismopsis*. Face more reclinate than in other species; supplementary carinae very distinct, sharp; frontal costa complete, strongly sulcate on its whole length; eyes elongated, somewhat sharpened above; fastigium quite horizontal, prominent, broadly rounded on the apex; antennae two times as long as the head and pronotum taken together. Pronotum elongated; lateral keels subparallel, very faintly incurved; lateral lobes distinctly longer than their vertical depth. Elytra large, strongly inflated with a straight second radial vein. Interspace between mesosternal lobes quadrate or slightly transverse. Hind legs relatively long, with relatively slender hind femora. Subgenital plate very long, narrowly-conical, as long as the widest part of hind femora.



♀. More robust and resembling somewhat *Ch. dispar*. Supplementary facial carinae well developed; frontal costa sulcate below median ocellum; eyes semicircular, elongated but not acute above; antennae nearly half again as long as the head and pronotum taken together, somewhat depressed at the base but not dilated as in ♀♀ of *Chrysochraon*. Disc of pronotum widened in metazona; lateral keels variable, subparallel or markedly incurved in prozona, distinctly divergent in metazona or regularly incurved near typical sulcus. Elytra elongated, variable in shape, not contiguous above but sometimes approached to each other; apex somewhat sharpened, not, or feebly pointed; preapical excision developed or absent; maximum width of elytra larger than maximum width of hind femora. Mesosternal interspace transverse, two or less times as broad as long. Hind femora relatively slender and long. Ovipositor with sectorially excised dorsal surface of the upper valvae.

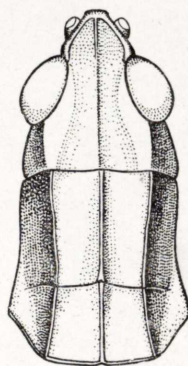


Fig. 3.—*Podismopsis* (*Eurasiobia* sbg. n.) *genicularibus* (Shiraki): Dorsal view of the head and pronotum of ♂ (from Furumaki, S. Saghalien);  $\times 6$ .

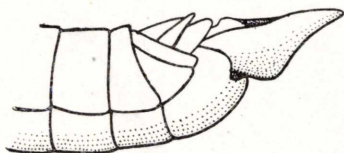


Fig. 4.—*Podismopsis* (*Eurasiobia* sbg. n.) *genicularibus* (Shiraki): Lateral view of the apex of abdomen of ♂ (from Furumaki, S. Saghalien);  $\times 5$ .

Coloration of the same type as in the genus *Podismopsis* and never as in *Chrysochraon*. Antennae black in ♂ and brownish in ♀. General coloration brownish-yellow or brownish-olivaceous in ♂ and chocolate-brown, dark brown or pale-brownish red in ♀. Elytra brownish-yellow, pellucid, in ♀ brownish, not pellucid. Hind femora with black knees, in ♂ brownish-yellow, without any spots, in ♀ brown, with indistinct spots and often with reddish lower side.

	♂♂	♀♀
Length of body .....	19 -22 mm.	25 -32 mm.
— of pronotum.....	3.3-4 —	5 -6 —
— of elytra .....	11.5-12 —	5.2-7 —
— of hind femora.....	13 -14 —	14 -15.5 —



This interesting species resembles somewhat a *Chrysochraon*, specially in the female sex (more reclinate face, subparallel lateral keels of the pronotum in ♂, elongated lateral lobes of the pronotum, rela-

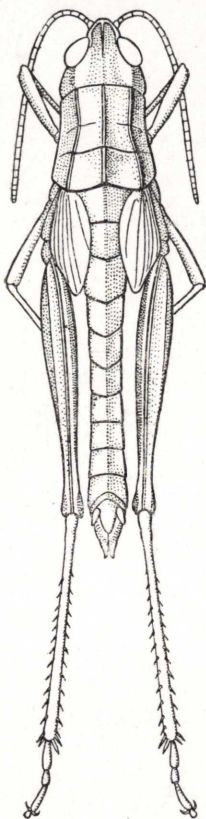


Fig. 5.—*Podismopsis* (*Eurasiobia* sbg. n.) *genicularibus* (Shiraki): Dorsal view of ♀ (Roskosh, distr. Khabarovsk);  $\times 2$ .

tively narrow mesosternal interspace and relatively slender hind femora) but there is no doubt that it is a member of the genus *Podismopsis*, related to ancestors of the genus *Chrysochraon* and *Podismopsis* s. lato; the structure of genicular lobes of hind femora, the shape of elytra, especially in ♂ (in ♀ elytra vary from the shape like those in *Chrysochraon* to the shape represented in other species of the genus *Podismopsis*), the structure of antennae, the coloration and other features of *P. (E.) genicularibus* are similar to the other species of the genus *Podismopsis*.

GEOGRAPHICAL DISTRIBUTION.—The insels Yezo and Saghalien, Kurile Islands, Ussury region to Khabarovsk district, the middle course of the river Amur, the river Bureia region, basin of the Amur, and Jakutsk.

Specimens examined, 8; 2 ♂♂ and 6 ♀♀.

*S. Saghalien*.—Furumaki, 22.VII.1928, 1 ♂ (H. Furukawa); Kamkiminai, 22.VII.1928, 1 ♀ (H. Furukawa).

*Ussury region*.—Roskosh, distr. Khabarovsk, 13-18.VII.1926, 3 ♀♀ (Chmara).

*Amur district*.—Ventzelevskoye (about 48° N) near the middle course of Amur, 17-18.VII.1926, 2 ♀♀; the river Bureia region, 1 ♀ (Schrenk's expedition).

*Jakutia*.—Jakutsk, 25.VIII.1927, 1 ♀ (Moskvin).

## 2. *Podismopsis* (*Eurasiobia*) *poppiusi* (Miram).

(Figs. 2, 6, 7, 13.)

1906. *Chrysochraon poppiusi* Miram, Öfv. Finska Vet. Soc. Förh., XLIX, n. 6, p. 3 [♂; Petshora and Arkhangelsk, Northern Russia; Olenista, Kola Penins.; Abakansky Savod, Central Siberia; Zhigansk on the river Lena; Tunguska, Northern Siberia].



1906. *Chrysochraon* sp. n. Miram, loc. cit., p. 4 [♀; Osnatshennaya, Central Siberia; Zhigansk, Northern Siberia].
1911. *Chrysochraon poppiusi* Kirby, Syn. Cat. Orth., III, p. 147
1911. *Podismopsis poppiusi* Ikonnikov, Rev. Russe d'Ent., XI, pp. 97-98 [the river Northern Sosva, N. W. Siberia; insel Tshizhovsky and Mglá, polar European Russia (form. Arkhangelsk gouvern.)]
1918. *Podismopsis poppiusi* Pylnov, Mem. Inst. Agron. Voronezh, III, p. 140 [Arshan, distr. Irkutsk, E. Siberia].
1925. *Podismopsis poppiusi* Berezhkov, La Déf. des Plantes, II, p. 213 [Toms, W. Siberia].
1926. *Podismopsis altaica* Tarbinsky, Rev. Russe d'Ent., XIX, 1925, p. 181 (nec Zub.) [Kolyvansky Zavod, formerly in Altai govern., W. Siberia].
1926. *Podismopsis altaica poppiusi* Bey-Bienko, Trans. Siber. Acad. Agr. Forestry, V, p. 45 [Kuiatsha, Baragash and Tsherga, N. (peripheral) Altai Mountains].
1926. *Crysochraon poppiusi* Miram, Mem. Acad. Sc. U. S. S. R., XXVIII, 18, p. 1 (sep.) [Berezov, Bolshoi Atlym, Kushevat, Pitlarskie Jurty, Parovatskie Jurty, Pei-ia-vozh and vic. of Obdorsk (polar part of W. Siberia and the area of the mouth of Ob)].
1927. *Podismopsis poppiusi* Bey-Bienko, Trans. Siber. Acad. Agr. Forestry [Obdorsk (polar part of W. Siberia in the area of the mouth of Ob)].
1928. *Podismopsis poppiusi* Miram, Mat. Com. Etud. Republ. Jakoute, 27, p. 11 [Nizhniaya Tunguska, Suntarskaya, Tshona and Matsha (Jakutsk Republ.)]
1928. *Podismopsis poppiusi* Kolosov, Katal. Priamokr. Sredn. Urala, p. 5 [Sverdlovsk (formerly Ekaterinburg) district, Ural Mountains].

♂. Size medium for the genus, form relatively robust. Face moderately reclinate; frontal ridge complete, reaching the clypeus, with parallel of feebly divergent margins, feebly to moderately sulcate about median ocellum and more or less flat near the clypeus and between antennal bases; eyes semicircular, not elongated, practically not acute above; supplementary facial carinae distinct but not sharp; antennae half again as long as the head and pronotum taken together; middle joints two times or a little more as long as broad; fastigium of vertex horizontal or faintly sloping, not produced, rectangular on the apex. Lateral keels of the pronotum feebly incurved in prozona; lateral lobes practically as long as their vertical depth. Elytra variable in length, with relatively narrow scapular area which is not more than twice as broad as interradiar area. Mesosternal interspace transverse.



Hind femora relatively robust. Subgenital plate relatively short and robust, broadly conical.

♀. Very robust. Frontal ridge with a feeble sulcus below ocellum; antennae a little longer than the head and pronotum taken together. Lateral keels of the pronotum distinctly, sometimes strongly, incurved; disc of pronotum slightly widened behind. Elytra short, strongly abbreviate, narrowed, not broader than hind femora, with subrectangular or feebly acute but not pointed apex, without a preapical excision; radial veins practically straight. Mesosternal interspace about two times as broad as long. Hind femora robust and relatively short.

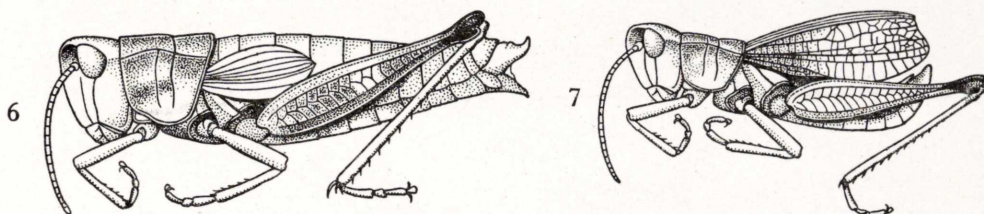


Fig. 6.—*Podismopsis* (*Eurasiobia* sbg. n.) *poppiusi* (Miram) —Lateral view of ♀ (from Osnatshennaya, Minusinsk district);  $\times 2$ . Fig. 7.—*Podismopsis* (*Eurasiobia* sbg. n.) *poppiusi* (Miram). —Lateral view of ♂ (from Osnatshennaya);  $\times 2$ .

Coloration strongly differs in ♂ and in ♀. The former is brownish-yellow or brownish-olivaceous, with dark, often black lateral stripes from eyes through the upper half of lateral lobes of the pronotum and mediastinal area of elytra to the apex of abdomen; in ♀ general coloration chocolate-brown or sometimes paler. Face in ♂ olivaceous, dirty-greyish or rarely brownish-grey, in ♀ of the same colour as the body. Elytra in ♂ feebly pellucid, brownish yellow or reddish-yellow, excepting black mediastinal area; in ♀ elytra of the same colour as the body. Hind femora and hind tibiae brownish-yellow in ♂; knee part black or more or less darkened; in ♀ hind femora brownish, with indistinct spots; lower surface reddish; hind tibiae reddish-brown; knee part blackened as in ♂. Lower surface of the body paler in both sexes.

	♂♂	♀♀
Length of body.....	15 -18 mm.	25 -28 mm.
— of pronotum .....	3.2- 3.3 —	4.8- 5.1 —
— of elytra.....	10 -11 —	3 - 4.6 —
— of hind femora.....	11 -12 —	12 -13 —



This widely distributed species is characterised by strong variation of the structure of the head and pronotum, venation and length of elytra, especially in ♂, and of general habitus, especially in ♀.

In 1926 I treated this species as a subspecies of *Podismopsis altaica* because some specimens of these two forms collected by me in Altai Mountains are more or less similar in general habitus to each other. However, in 1927 I distinguished these forms as distinct species because I found some features which separate *P. (E.) poppiusi* from *P. altaica* and at the present time these features are established by me as subgeneric in their systematic value. Mr. James A. G. Rehn in 1928 included *P. (E.) poppiusi* in the genus *Chrysochraon* but the genotype of this genus strongly differs from *P. (E.) poppiusi* in many features which are similar to those in *P. altaica*.

The species is typically phytophilous in its behaviour and inhabits plant associations with very rich and dense vegetation [see Baranov and Bey-Bienko, 1926] although females of this species lay their eggs in the ground [Berezhkov, 1925].

**GEOGRAPHICAL DISTRIBUTION.**—This is the most common and widely distributed species known from Kola Peninsula, Northern European Russia (its polar and subpolar part), Northern and Middle Ural Mountains, Northern part of W. Siberia from the river Northern Sosva to Obdorsk, the environs of Tomsk, north-western and Northern part of Altai Mountains including foothills, Central and Eastern Siberia from Minusinsk district to Transbaikalia, Yakutia and the Russian Far East, up to 65° N (in Yakutia).

Specimens examined, 46; 25 ♂♂, 19 ♀♀ and 2 larvae.

*Northern European Russia.*—Arkhangelsk, 1 ♂ (type); Petshora, 3 ♂♂ (paratypes); the village Fanez, form. Petshora distr., 19.VIII.1925, 1 ♂ (O. Tshernova).

*Ural Mountains.*—Basin of the river Manja, 29.VIII-1.IX.1927, 1 ♂, 1 ♀ (Flerov and Liapin); Verhnii Neivinsk, Central Ural, 14.VIII.1926, 2 ♂♂, 2 ♀♀ (V. Galjkov).

*Polar W. Siberia.*—The river Polui near Obdorsk, 5-12.VIII.1897, 2 ♀♀ (Drzewicki); Obdorsk (66° 40' N), 24.VI.1915, 1 ♂ and 2 larvae (Dr. S. Tshugunov).

*Altai Mountains.*—Baragash, 29.VII.1925, 2 ♂♂, 1 ♀ (G. Bey-Bienko); Kujatsha, 31.VII.1925, 2 ♂♂, 2 ♀♀ (G. Bey-Bienko); the



river Abai, 23.VII.1923, 2 ♂♂, 1 ♀ (Petliuk); Magota near Shebalino; 30.VIII.1923, 1 ♂; Shebalino, 5.VII.1925, 1 ♂ (Bey-Bienko).

*Central Siberia.*—Osnatshennaia, 1 ♀ (Ehrnberg); same locality, VIII.1930, 2 ♂♂, 2 ♀♀ (Th. Lukjanovitsh).

*Eastern Siberia.*—Eastern Transbaikalia, 1 ♂ (K. Pljater-Plokhotsky).

*Yakutia.*—The river Tshona, Vilui distr., 27.VII-2.VIII.1914, 2 ♂♂, 1 ♀; Matsha, middle source of the river Lena, 8.IX.1925, 1 ♂, (L. Bianchi); Suntarskoie, 8.VII.1914, 1 ♀ (Dolenko); the river Lower Tunguska, 1 ♂, 2 ♀♀.

*Russian Far East.*—The bay Dzhigit, Ussury region, 6.VII.1924, 1 ♂, 1 ♀ (Emeljanov); Sikhota-Alin, Ussury region, 1 ♀ (A. Emeljanov); Shkatovsky raion, IX.1926, 1 ♀.

### 3. *Podismopsis (Eurasiobia) jacuta* Miram.

1928. *Podismopsis jacuta* Miram, Mater. Com. Etud. Rep. Jakoute, n. 24, pp. 11-13, figs. 1-3 [♂, ♀; road from Amginskaya Sloboda to Yakutsk].

Closely related to *P. (E.) poppiusi* but differs from it in some features as follows: body more robust, with relatively longer hind femora. Frontal ridge subobliterate below middle ocellus and quite absent near clypeus, strongly divergent downwards; fastigium of the vertex horizontal, forming with the face an acute (♂) or somewhat rounded angle. Elytra in ♂ broader, strongly inflated, shining; scapular area very broad, more than two and half times as broad as the interrarial area; hind radial vein on the apex strongly incurved backwards; elytra in ♀ with distinctly incurved radial veins.

	♂♂		♀♀	
Length of body.....	16	mm.	23-25	mm.
— of pronotum.....	3.9-4	—	4.8-5	—
— of elytra.....	10.5-11	—	4.5	—
— of hind femora.....	12	—	13	—

This is unquestionably a distinct species but separated from *P. (E.) poppiusi* with a great difficulty, especially in the case of specimens of



larger dimensions. The features given by Miss E. Miram for distinguishing *P. (E.) jacuta* from *P. (E.) poppiusi* (structure of the ovipositor) is not reliable as the shape of the ovipositor is variable in these species.

GEOGRAPHICAL DISTRIBUTION.—Known only from Jakut Republic.

Specimens examined, 8; 2 ♂♂ and 6 ♀♀.

*Jakutia*.—Road between Amginskaja Sloboda and Jakutsk, 17. VIII.1925, 2 ♂♂ (including the type) and 6 ♀♀ (L. Bianchi).

#### 4. *Podismopsis (Eurasiobia) relict*a Ramme.

1931. *Podismopsis relict*a Ramme, Zool. Anz., 93, p. 123, figs. 1 b, c; 2 b [♂, ♀; Hailer Planina near Rugowa, Montenegro].

♂. Body relatively slender. Antennae short, as long as the head and pronotum together; antennal joints practically as long as broad; fastigium of the vertex faintly sloping; face moderately reclinate, with quite distinct and sharp supplementary carinae; frontal costa distinctly sulcate from the middle ocellum to clypeus, with feebly divergent margins; eyes semicircular. Lateral keels of the pronotum subparallel in prozona and somewhat divergent in metazona; hind margin of the pronotum with a feeble median excision. Elytra narrow, shining, extending a little beyond the middle of hind femora; apex somewhat narrowed, with distinct but not strongly developed oblique truncation. Interspace between mesosternal lobes half again as broad as long. Hind femora relatively short; arolium between claws of hind tarsi narrow but as long as the claws. Subgenital plate shortly-conical, acute at the apex.

♀. Very robust. Antennae distinctly shorter than the head and pronotum taken together; fastigium of the vertex quite horizontal; face faintly sloping, supplementary carinae as in ♂; frontal costa practically flat. Lateral keels of the pronotum roundly incurved, feebly divergent backwards; hind margin with very distinct median excision. Elytra a little longer than broad, subrectangular at the apex, not extending to the apex of the second abdominal tergite. Interspace between mesosternal lobes very broad, two and half times as broad as long. Valvae of the ovipositor short; upper pair strongly incurved and sharpened at the apex, sectorially excised on the dorsal surfaces.

Coloration of the same general type as in other species of the ge-



nus: face not darkened, in ♂ with black interspace between antennal base and margins of the fastigium. Postocular portion, upper part of lateral lobes, mediastinal area of elytra and hind knee blackened in ♂. Coloration of ♀ uniformly dirty-brownish. Outer side of hind femora unicolor, yellowish brown in ♂ and brownish in ♀; lower surface pale-yellow in ♂ and yellow in ♀. Hind tibiae yellow, with blackened apices of spines.

	♂	♀
Length of body.....	15.5 mm.	20 mm.
— of pronotum.....	2.8 —	3.7 —
— of elytra.....	7.7 —	3.6 —
— of hind femora.....	9 —	10.8 —

This is the second species of the genus *Podismopsis* known from Europe. Its occurrence in the alpine zone of Montenegro shows its relict origin as interpreted by Ramme and suggest that the species is a member of the glacial invasion of Angaran fauna into Europe.

GEOGRAPHICAL DISTRIBUTION. — Known only from Montenegro, elevation 1,800 m.

Specimens examined, 2; 1 ♂, 1 ♀.

*Montenegro*.—Hailer Planina near Rugowa, 1,800 m., VIII.1930, 1 ♂ (type) and 1 ♀ (paratype), M. Walter leg. [Coll. Berlin Zool. Mus.]

##### 5. *Podismopsis* (*Eurasiobia*) *gynaemorphia* Ikonn.

(Fig. 8.)

1911. *Podismopsis gynaemorphia* Ikonnikov, Ann. Mus. Zool. Acad. Imp. Sc. St Petersburg, pp. 247-248 [♂; Evseevka, South Ussury region].  
 1911. *Podismopsis* sp. (anne ♀ *P. gynaemorphae* ?) Ikonnikov, loc. cit., pp. 248-249 [♀; Exseevka, S. Ussury region].  
 1929. *Podismopsis gynaemorphia* ? Dirsh, Trav. Mus. Zool. Acad. Sc. Ukraine, n. 7, p. 225, figs. 8, 10 [♀; Brovniitshi, the river Sutshan, Brovki and Morozovka, South Ussury region].

♂. Very like in general habitus to females of *P. (E.) genicularibus*. Fastigium of the vertex horizontal; frontal ridge strongly sulcate, with divergent keels; antennae less than half again as long as the head and pronotum taken together. Pronotum as in females of the subgenus *Eurasiobia*; lateral keels distinctly but regularly incur.



ved; metazona with distinct rugosities and with excised hind margin. Elytra strongly abbreviated, not or scarcely reaching the middle part of hind femora and only reaching or scarcely extending beyond the middle part of abdomen; anal margins not contiguous, separated along their whole length; anal field very narrow. Mesosternal interspace about as long as broad. Abdomen long and thick; subgenital plate long, narrowly conical and sharpened on the apex. Hind femora long, relatively slender.

General coloration brownish yellow; interspace between antennal base and margins of fastigium brownish dark but not black; post-ocular dark stripe present. Pronotum without dark stripes on disc and lateral lobes. Mediastinal area of elytra faintly darkened. Hind femora unicolorous on the outer and upper sides; lower surface yellowish; knee part darkened but not black; hind tibiae yellowish, with a feeble reddish shade.

This interesting species was described by Ikonnikov from two males; females of the species have not been described by Ikonnikov but in all probability the single ♀ described by the author under the name «*Podismopsis* sp. (anne ♀ *P. gynaemorphae*)» belongs to the same species. Dirsh's records of «*Podismopsis gynaemorphae* ? Ikonn.», based on ♀♀ unquestionably refer to *P. (E.) gynaemorphae* because these females are characterised by very short and broad elytra, i. e. the features like those in the male sex of this species. Ovipositor in these females is similar to the same of *P. poppiusi* or *P. altaica* as shows the description of Ikonnikov and the figure given by Dirsh.

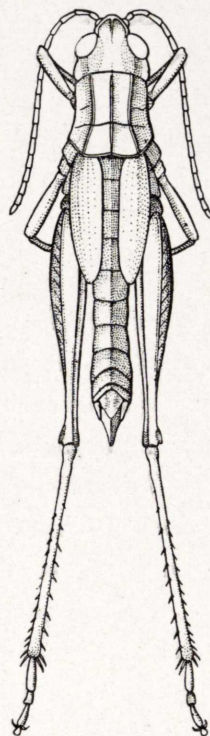


Fig. 8.—*Podismopsis* (*Eurasio-bia* sbg. n.) *gynaemorphae* Ikonn.—Dorsal view of ♂ (type, Evseevka, Ussury region);  $\times 2$ .

	♂♂	♀ (after Ikonnikov).
Length of body.....	22.3-23.8 mm.	21.3 mm.
— of pronotum.....	4.8 —	5 —
— of elytra.....	8.1- 9.3 —	5 —
— of hind femora.....	12.2-14.3 —	14.2 —



GEOGRAPHICAL DISTRIBUTION.—Known only from South Ussury region.

Specimens examined, 2 ♂♂.

*South Ussury region*.—Evseevka, 10-24.VI.1910, 2 ♂♂, type and paratype [Ikonnikov's coll., Zool. Mus. Moscou University].

### B. Subgenus **Podismacris** nov.

Very like to subgenus *Eurasiobia* but differs from it by the structure of the female ovipositor, as follows: valvae of the ovipositor elongated, slender, not incurved; dorsal surface of the upper pair practically straight, or feebly incurved but not sectorially excised.

Type: *Podismopsis ussuriensis* Ikonn.

This subgenus is characterised by all essential features of the subgenus *Eurasiobia*, except the structure of the ovipositor which is very like to the same in genera *Mongolotettix* Rehn and *Euthystira* Fieb.

The subgenus include two species and one subspecies distributed from the polar Jakutia and the river Bureia to South Ussury region, Manchuria and Korea.

### Key to species and subspecies.

- 1 (4). Hind femora not blackened on the outer side, unicolorous pale-yellow. Antennae in ♂ about two times, in ♀ half again as long as the head and pronotum together. Subgenital plate of ♂ very long, narrowly conical or-if broadly conical-elytra narrow, 2,5-3 times as long as broad.
  - 2 (3). Larger. Elytra of ♂ broad, less than 2,5 times as long as broad. Middle joints of antennae in ♀ more than 2 times as long as broad..... 1. **P. (P.) ussuriensis ussuriensis** Ikonn.
  - 3 (2). Smaller. Elytra of ♂ narrow, 2,5-3 times as long as broad. Middle joints of antennae in ♀ not more than 2 times as long as broad..... 2. **P. (P.) ussuriensis micra** sbsp. n.
- 4 (1). Hind femora blackened on the outer side. Antennae in ♂ half again as long as the head and pronotum together. Subgenital plate in ♂ broadly-conical, short. Elytra in ♂ very broad, only 2 times as long as broad ..... 3. **P. (P.) gelida** Miram.



1. **Podismopsis (Podismacris) ussuriensis** Ikonn.

1911. *Podismopsis ussuriensis* Ikonnikov, Ann. Mus. Zool. Acad. Imp. Sc. St. Petersburg, pp. 246-247 [♂, ♀; Evseevka and Kamen-Rybolov, S. Ussury region].
1913. *Podismopsis ussuriensis* Ikonnikov, Über die v. P. Schmidt aus Korea mitgebr. Acridiideen, p. 11 [Koredj to Dore, Korea].
1928. [*Mongolotettix*] *ussuriensis* Rehn, Proc. Acad. Nat. Sc. Philad., p. 202, footnote.
1929. *Podismopsis ussuriensis* Bey-Bienko, Zool. Anz., 81, pp. 68-69 (partim) [Krivoi Klutsh, Vladivostok distr.].
1929. *Podismopsis ussuriensis* Bey-Bienko, Konowia, VIII, p. 100 [Station Gaolintzsy, Manchuria].
1929. *Podismopsis ussuriensis* Dirsh, Trav. Mus. Zool. Acad. Sc. l'Ukraine, n. 7, pp. 224-225, figs. 7, 9 [Different parts of South Ussury region].
- ? 1930. *Podismopsis shareiensis* Shiraki, Trans. Natur. Hist. Soc. Formosa, xx, pp. 327-328 [♂, Sharei, South Manchuria].

This species is very like *P. (E.) poppiusi* Miram in its general habitus and coloration; males of both species are distinguished with difficulty.

♂. Size medium for the genus. Face moderately reclinate; frontal ridge complete, with parallel or subdivergent margins, distinctly sulcate along the whole length except the upper part of ridge; eyes semicircular, feebly elongated, feebly acute above; facial carinae sharp and very distinct; antennae two or more times as long as the head and pronotum taken together; middle joints more than twice as long as broad. Fastigium of the vertex horizontal or faintly sloping. Pronotum and elytra variable, do not differ from the same in *P. (E.) poppiusi*. Mesosternal interspace transverse. Hind femora relatively slender. Subgenital plate elongated, narrowly conical.

♀. Very robust. Frontal ridge moderately sulcate near the middle ocellum; antennae nearly half again as long as the head and pronotum taken together. Elytra very short, practically as long as pronotum, quite lateral, somewhat longer than broad, with very feebly pointed apex; basal half of anterior margin practically straight, apical half strongly rounded. Valvae of the ovipositor elongated, slender; dorsal surface of the upper pair not sectorially excised, practically straight.



General coloration brownish-olivaceous. Antennae brownish. Lateral parts of the body from the hind margin of eyes, upper half of the lateral lobes of the pronotum and mediastinal area of elytra to the apex of abdomen brownish black; knee part of hind legs darkened, often black in ♂.

Hind tibiae brownish-yellow in ♂ or reddish-brown in ♀. Elytra in ♂ shining as glass, especially in scapular area; in ♀ not shining, brownish.

	♂♂	♀♀
Length of body .....	17.5-20 mm.	23.5-31 mm.
— of pronotum .....	4 - 4.2 —	5 —
— of elytra .....	9.2-12.5 —	4.6- 5 —
— of hind femora .....	12 -13 —	14.5-15.5 —

Shiraki's *P. shareiensis* described on a single male specimen from S. Manchuria is probably a pure synonym of *ussuriensis* as all the features established by Shiraki for distinction of both species are very variable in *ussuriensis* and have no specific diagnostic value (the form of the pronotum and fastigium, the form of elytra and even the structure of the frontal costa, which in *P. shareiensis* is somewhat sulcate and in *ussuriensis* with more or less distinct sulcus).

Specimens from northern part of Ussury region (Habarovsk district) and from N. Manchuria are characterised by somewhat smaller dimensions than typical South-Ussurian specimens and belong to subsp. *micra* n. described below.

Males of *P. (P.) ussuriensis* differs from *P. (E.) poppiusi* by longer antennae, strongly sulcate frontal ridge and by longer narrowly conical subgenital plate, which in *P. (E.) poppiusi* is less elongated, broadly-conical.

GEOGRAPHICAL DISTRIBUTION.—From Korea and South Ussury region (Vladivostok district) to South Manchuria on the West.

Specimens examined, 9; 7 ♂♂, 2 ♀♀.

*South Ussury region*.—The lake Hanka, 1 ♂ [coll. Ikonnikov, n. 1004, paratype]; Krivoi Klutsh, 1 ♂, 2 ♀♀; Tigrovaia, 2 ♂♂ (Verestshagin); Derzhanovo, 20.VI.1927, 2 ♂♂ (Verestshagin); Jakovlevka, 1 ♂ (N. Filipiev).



## 2. *Podismopsis (Podismacris) ussuriensis micra* sbsp. n.

1929. *Podismopsis ussuriensis* Bey-Bienko, Zool. Anzeiger, 81, pp. 68-69 (partim) [Kartun, Khabarovsk district].  
 1929. *Mongolotettix ussuriensis* Bey-Bienko, Ann. Mag. Nat. Hist., Ser. 10, v, pp. 496-497 (nec Ikonnikov) [Hingan, N. Manchuria].

As the typical *P. (P.) ussuriensis* Ikonn. but differs strongly from it in distinctly smaller size, in more obtuse subgenital plate of ♂, in more narrow elytra, which about 2.5-3 times as long as broad and in shorter middle joints of antennae which usually not more than two times as long as broad. Dimensions are, as follows:

	♂♂	♀♀
Length of body.....	15 -17 mm.	21-24 mm.
— of pronotum.....	3 - 3.2 —	4- 4.7 —
— of elytra.....	8.5- 9.1 —	4- 4.1 —
— of hind femora.....	11 -11.4 —	11-13 —

Kartun, Khabarovsk district, VII.1927, 2 ♂♂; Khabarovsk, 15.VII.1926, 2 ♂♂ (V. Engelhardt) (including the type); Hingan, Manchuria, 1 ♀ (P. A. Pavlov); Ventzelevskoye, near middle course of Amur, 17-18.VII.1926, 1 ♂, 1 ♀; ? the river Bureia region, 1 ♂, 2 ♀♀ (Schrenk's expedition).

We know many examples from species distributed in Eastern Siberia and adjacent countries that produces a more robust and larger subspecies in South Ussury region.

## 3. *Podismopsis (Podismacris) gelida* Miram.

1931. *Podismopsis gelida* Miram, Zool. Anz., 97, pp. 40-43, figs. 1-3 [♂, ♀; Ken-Jurach, upper Jana; riv. Endibal; Jana, near the mouth of Adytsha; upper course of Neljgeche; all in Verhojansk district, polar Yakutia].

This just described species is characterised, as follows:

♂. Size small, form robust. Antennae half again as long as the head and pronotum together; frontal costa distinctly sulcate, with divergent or subdivergent margins. Pronotum with distinctly excised



hind margin and roundly incurved lateral keels. Elytra very broad, about two times as long as broad, with distinctly incurved radial veins. Subgenital plate short, obtusely-conical, shorter than maximum width of hind femora.

♀. Very robust, very like to females of *P. ussuriensis micra*. Antennae a little longer than the head and pronotum together, middle joints not more than twice as long as broad. Elytra very short, not longer than pronotum. Valvae of the ovipositor elongated as in the type of the subgenus *Podismacris* or with somewhat incurved upper surface of the upper valvae but not incurved and without sectorial excision.

General coloration much darkened than in other species, dark-brown with blackish. Elytra in ♂ with blackened mediastinal area and both ulnar veins. Abdomen brownish, in ♂ with an olivaceous shade, with blackish lateral stripes or with admixture of black. Hind femora in both sexes with blackened external side and black knee part.

	♂	♀
Length of body.....	15 mm.	19 mm.
— of pronotum.....	3.1 —	4 —
— of elytra.....	9 —	3.1 —
— of hind femora.....	11 —	11 —

This interesting species strongly differs from other forms of the subgenus *Podismacris* by short subgenital plate of ♂, very broad and short elytra of ♂, short antennae and dark general coloration.

GEOGRAPHICAL DISTRIBUTION.—Known only from Verchojansk district, polar part of Jakutia.

Specimens examined, 17; 15 ♂♂, 2 ♀♀. The whole of original series (including the type) from Verchojansk district, mentioned above.

### C. Subgenus **Podismopsis** s. str.

1900. *Podismopsis* Zubovsky, Horae Soc. Ent. Ross., xxxiv, p. 2 [type *P. altaica* Zub. (by monotypy)].  
 1910. *Podismopsis* Kirby, Syn. Cat. Orthopt., III, p. 147.  
 1911. *Podismopsis* Ikonnikov, Rev. Russe d'Entom., XI, p. 97 (partim).



1911. *Podismopsis* Ikonnikov, Ann. Mus. Zool. Acad. Sc. St. Pétersb., p. 246 (partim).  
 1926. *Podismopsis* Bey-Bienko, Trans. Siber. Acad. Agric. Forestry, v, p. 45 (partim).  
 1927. *Podismopsis* Bey-Bienko, loc. cit., vi, n. 8 (1926), p. 9 (partim).  
 1928. *Podismopsis* Rehn, Proc. Acad. Nat. Sc. Philad., p. 195.

The most robust genus in the group. Head very heavy; fastigium distinctly sloping, not produced; face subvertical, especially in ♀, seen in profile distinctly roundly convex in ♀; frontal ridge flat, or in ♂ very faintly impressed near middle ocellum; supplementary facial carinae very feeble or quite absent, especially in ♀; eyes very short, with right upper angle; antennae thick, in ♂ as long as the head and pronotum taken together; in ♀ shorter, moniliform; the middle joints in ♂ less than two times as long as broad; head seen from above with quite prominent cheeks. Pronotum very short, always with relatively strongly incurved lateral keels, with a distinct constriction near the middle of the prozona. Elytra in ♂ short, not at all reaching the apex of hind femora or abdomen, egg-shaped, indistinctly truncate on the apex but never broadly rounded; venation very dense, cells very narrow; elytra in ♀ very short, oval, quite lateral, with indistinct venation. Mesosternal interspace very broad, in ♂ two and more times, in ♀ more than twice as broad as long. Subgenital plate in ♂ very robust and short, broadly-conical and practically not acute on the apex; female ovipositor short and robust; dorsal pair incurved, with distinctly roundly excised upper surface. Hind femora very robust. All arolia between claws feeble, not longer than half of a claw.

Type: *Podismopsis altaica* Zub.

This is probably the most specialized subgenus characterised by very robust and «geophilous» habitus. The subgenus is represented by a single species, viz. *P. altaica* Zub., and all other species previously included in *Podismopsis* belong to different subgenera treated above.

#### 1. *Podismopsis* (s. str.) **altaica** Zub.

(Figs. 9, 10, 14.)

1900. *Podismopsis altaica* Zubowsky, Horae Soc. Ent. Rossicae, xxxiv, pp. 2-3 [♂, ♀: Kysas river and Zimovje, near Abakan river, Kuznetzk Altai; Ongudai, Altai Mountains; Kalanyngyr river, Tshan-burgaza river and Kara-su river, Altai Mountains near Mon-



- golian border; Olonur river, Mongolian Altai Mountains; Karysh river, Minusinsk distr., Central Siberia].
1902. *Chrysochraon altaicus* Jacobson and Bianchi, Priamokr. Lozhn. Ross. Imp., p. 219.
1910. *Podismopsis altaica* Kirby, Syn. Cat. Orth., III, p. 147.
1911. *Podismopsis altaica* Ikonnikov, Rev. Russe d'Ent., XI, p. 97 [Oznatshennaja, Minusinsk district, Centr. Siberia; Kosogol-lake, N. Mongolia; Kultuk, Southern shore of Baikal-lake, E. Siberia; Uda, Uda-Malka, Malyshevka and Ossa, form. Irkutsk gouv., E. Siberia].
1911. *Podismopsis altaica* Ikonnikov, Ann. Mus. Zool. Acad. Imp. Sc. St. Pétersb., p. 246 [Kosogol-lake, N. Mongolia; Irkutsk, E. Siberia].
1913. *Podismopsis altaica* Ikonnikov, Über die v. P. Schmidt aus Korea mitgebr. Acridiodeen, p. 11 [Juchemsa, Korea].
1926. *Podismopsis altaica altaica* Bey-Bienko, Trans. Siber. Acad. Agr. Forestry, v, p. 45 [different parts of Russian Altai Mountains].
1927. *Podismopsis altaica* Bey-Bienko, ibidem, VI, n. 8, p. 9 [Altai Mountains near Mongolian border; Mongolian Altai Mountains near Russian border].
1928. *Podismopsis altaica* Rehn, Proc. Acad. Nat. Sc. Philad., p. 195, pl. XXII, figs. 1-3; pl. XXIII, figs. 1-2.

♂ ♀. Body small and very heavy. Head very thick, seen from the front strongly widened downwards. Pronotum short, with excised (♀) or truncate (♂) hind margin. Abdomen short, in ♀ very thick. Valvae of the ovipositor often not completely visible.

General coloration brown, with reddish or blackish indistinct spots. Antennae dark brownish or reddish-brown. Face reddish-brown,

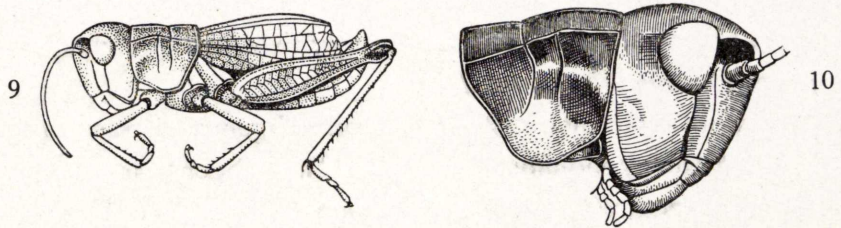


Fig. 9.—*Podismopsis* (s. str.) *altaica* Zub.—Lateral view of ♂ (from Kuraiskaya steppe, Altai Mountains);  $\times 2$ . Fig. 10.—*Podismopsis* (s. str.) *altaica* Zub.—Lateral view of the head and pronotum of ♂ (Kuraiskaya steppe, Altai Mountains);  $\times 8$ .

brownish grey or greyish (♂), often with a dark spot on the lower part of the front; interspace between margins of the fastigium of the vertex and the base of antennae, black, often shining. Pronotum with black oblique stripe in the anterior part of the lateral lobes. Elytra brown-



ish, not pellucid, feebly shining; basal part of anterior half of elytra dark brown, especially the mediastinal area. Hind femora brownish-yellow outside, with two indistinct (♂) or more or less distinct (in ♀) brownish stripes on the upper side; lower margin yellow in ♂ or reddish in ♀; knee part blackened, especially in ♂. Hind tibiae yellow in ♂ or reddish in ♀; spines with darkened apices. Tarsus brownish. Underside of the body brownish-yellow in ♂ or with a reddish shade in ♀.

	♂♂	♀♀
Length of body .....	13.5-16 mm.	17-24 mm.
— of pronotum .....	2.8-3.3 —	3.9-4.9 —
— of elytra .....	6.5-8.5 —	2.5-4 —
— of hind femora .....	8.2-10 —	9.2-11.5 —

This is the most heavy and smallest species of the group. Like *P. (E.) poppiusi*, the species is strongly variable in dimensions, shape of the pronotum and in the development of elytra but the essential features, partly demonstrated by Rehn are very characteristic for *P. altaica* and show that other species included in previous time in the genus *Podismopsis* are not intimately related to *P. altaica*. However, *Podismopsis* s. str. is unquestionably congeneric with the group of species, separated by me in the subgenus *Eurasiobia*, as these subgenera are all characterised by similar structure of pronotum and elytra and by the same type of coloration, which strongly differs from those in another genera.

GEOGRAPHICAL DISTRIBUTION.—Russian and Mongolian Altai Mountains, Kuznetzk Alatau, Central and Eastern Siberia from Minusinsk to Irkutsk districts, lake Kossogol in North Mongolia and Korea.

Specimens examined, 29; 12 ♂♂ and 17 ♀♀.

*Russian Altai Mountains*.—The river Karysh, 28.VII.1897, 1 ♂ (Wagner) (type); Kalanyngyr, 25.VII.1897, 3 ♀♀ (Newsky) (paratypes); Tenga, VII.1925, 2 ♂♂ (G. Bey-Bienko); Ongudai, 6.VII.1925, 1 ♂ (G. Bey-Bienko); Kuraiskaya and Tshuiskaya steppes, VII.1925, 2 ♂♂, 2 ♀♀ (G. Bey-Bienko); the river Kara-su, 18.VIII, 1 ♂, 3 ♀♀; near Taldurinsky Glacier up to 2,900 m., 19-20.VII.1925, 1 ♂, 1 ♀ (G. Bey-Bienko); the river Aksai near the lake Tshaibok-kul,



20.VIII.1926, 3 ♂♂, 3 ♀♀ (Prof. V. Baranov); the river Jasater, 17.VIII.1926, 2 ♀♀ (Prof. V. Baranov); summit of the mount Prokhodnoi, near Riddersk, 22.VII.1923, 1 ♀ (G. Bey-Bienko).

*Mongolian Altai Mountains.* — The river Hary-jamaty, 10.VIII.1926, 1 ♂, 2 ♀♀ (Prof. V. Baranov).

#### IV. Genus **Euthystira** Fieb.

1826. *Gryllus* Ocskay, Nov. Acta Acad. Leop. Car., XIII (1), p. 409 (partim).  
 1853. *Euthystira(e)* Fieber, Lotos, III, p. 118. Mai.  
 1853. *Chrysochraon* Fischer, Orthopt. Europ., p. 309. September.  
 1910. *Chrysochraon* Kirby, Syn. Cat. Orthopt., III, p. 146 (partim).  
 1928. *Eogeacris* Rehn, Proc. Acad. Nat. Sc. Philad., LXXX, p. 198 (*syn. nov.*)

Body very slender in ♂, subfusiform in ♀, with strongly reclinate face; frontal ridge strongly sulcate in its greater part; supplementary facial carinae well developed, acute in ♂. Vertex horizontal, prominent, rectangular in ♀ or a little less than 90° in ♂, not very broadly rounded at the apex, with straight lateral margins; foveolae absent. Antennae distinctly compressed in basal half and very feebly broadened (in ♂ less, in ♀ more) but not at all ensiform. Pronotum subcylindrical, with practically straight and parallel lateral keels; median keel more strong than the lateral ones, which are not sharp but quite distinct; disc of pronotum somewhat elevated along median keel and therefore lateral parts of the disc sloping, especially in ♀, hind margin feebly roundly angulated or truncate, or very faintly excised. Elytra in ♂ inflated, abbreviated, narrow, distinctly obliquely-truncate on the apex; elytra in ♀ quite lateral, with subrectangular, not pointed apex; transverse veinlets not quite regular, forming not rectangular cells in interulnar and discoidal areas. Mesosternal interspace subquadrate or somewhat elongated in ♂. Subgenital plate ♂ long, strongly conically-produced. Valvae of the ovipositor elongated, slender, not incurved at the apex; upper margin of dorsal pair not sectorially excised. Hind femora very slender; genicular lobes acute at the apex; arolium strongly developed, as long as the claws; hind metatarsus longer than third tarsal joint.



Genotype: *Gryllus brachypterus* Ocsk.

The Fieber's name *Euthystirae* was established (without indication of type) for two species included by him in the genus *Chorthippus*, viz. *Ch. dispar* and *Ch. brachypterus*. The name *Chrysochraon* was based by Fischer on the same two species also without indication of type, but Kirby in 1910 fixed *Ch. dispar* as the genotype of *Chrysochraon*. Rehn in 1928 correctly separated *Ch. brachypterus* in a distinct genus, *Eogeacris*, with this species as the genotype. Any of these two generic names formally can be synonymized with *Euthystira* but as the name *Chrysochraon* is known during many years I prefer to designate *Ch. brachypterus* as the genotype of *Euthystira* and therefore Rehn's *Eogeacris* falls as a pure synonym of *Euthystira*.

This genus is easily separated from *Chrysochraon* by the structure of pronotum, elytra and the female ovipositor. From the closely related *Mongolotettix* it differs in the structure of the antennae (especially in female sex), pronotum, elytra and hind tarsi.

#### Key to subspecies.

- 1 (2). More slender. Antennae ♀ distinctly longer than head and pronotum taken together; their 12-14th joints practically two times as long as broad. Disc of pronotum half again as long as broad, with practically parallel lateral keels; hind margin rounded or subtruncate. Lateral lobes in ♀ elongated... 1. ***E. brachyptera brachyptera*** (Ocsk.)
- 2 (1). More robust. Antennae in ♀ as long as the head and pronotum taken together; their 12-14th joints scarcely half again as long as broad. Disc of pronotum short, in ♀ less than half again as long as broad on its middle; lateral keels in metazona distinctly divergent; hind margin subexcised in both sexes. Lateral lobes in ♀ quadrate..... 2. ***E. brachyptera intermedia*** (Bol.)

#### 1. *Euthystira brachyptera brachyptera* (Ocsk.)

1826. *Gryllus brachypterus* Ocskay, Nov. Acta Acad. Leop. Car., xiii (1), p. 409 [Hungary].
1853. *Chorthippus ocskayi* Fieber, Lotos, III, p. 118 [the group, i. e. subgenus *Euthystira*(e) for *G. brachypterus* (= *Ch. ocskayi*) and *P. dispar* Germ.] Mai.



1853. *Chrysochraon brachypterus* Fischer, Orth. Europea, p. 309, pl. 16, fig. 7. September.  
 1910. *Chrysochraon brachypterus* Kirby, Syn. Cat. Orth., III, pp. 146-147 (cum synonyma, except *Ch. brachypterus* var. *intermedius* Bol.)  
 1928. *Eogeacris brachyptera* Rehn, Proc. Acad. Nat. Sc. Philad., p. 198, pl. XXII, figs. 6-8.

♂. Antennae more than half again as long as the head and pronotum taken together. Eyes short-oval, acute on the apex; fastigium with distinct longitudinal keel. Pronotum with practically straight and parallel lateral keels; metazona very faintly rugulose. Lateral lobes distinctly elongated. Elytra narrow, reaching only the middle of hind femora; scapular area widened, all other areas narrow, with more or less irregular transverse veinlets.

♀. More robust. Antennae distinctly longer than head and pronotum taken together; their 12-14th joints about twice as long as broad. Pronotum with subtruncate hind margin; lateral lobes distinctly longer than their vertical deep. Elytra somewhat extending beyond hind margin of the first abdominal tergite.

Coloration in both sexes light-green, often with a distinct golden shade. Knee part of hind legs not darkened; inner and lower surfaces of hind femora yellowish-green or pale-yellow; hind tibiae yellowish-green or greenish; spines with blackened apices; all tarsi and arolium greenish.

	♂♂	♀♀
Length of body.....	13.5-17 mm.	18 -26 mm.
— of pronotum.....	2.5- 3 —	3.6- 5 —
— of elytra.....	5.5- 7 —	3 - 4 —
— of hind femora.....	10 -11.5 —	14.5-16 —

GEOGRAPHICAL DISTRIBUTION.—The area of distribution of this subspecies is very large but less than that of *Ch. dispar dispar*. It occupies practically the whole of Western Europe (in Southern part only in mountainous regions) from South France to Roumelia (excepting the Apennine and Balkanian peninsulas on the South and Scandinavian peninsula in the North), the largest part of European Russia, excepting its Northern part from 55°-59° N, Ukraine, Northern Caucasus and Ciscaucasia, Ural Mountains, practically the whole of Kazakstan (Kir-



ghiz steppes) from Orenburg to Semipalatinsk, Zaisan and Semiretshye, steppe and forest steppe parts of W. Siberia, Altai Mountains, Southern part of Central and East Siberia, from Minussinsk (Miram, 1906, p. 3), Tulun (Tarbinsky, 1926, p. 279) and Irkutsk (Ikonnikov, 1911, p. 97) districts to Jakutsk Republic (Miram, 1928, p. 11), Transbaikalia (Uvarov, 1914<sup>2</sup>, p. 168), Amur (Brunner, 1882, p. 100) and Habarovsk, North Ussury region (Bey-Bienko, 1929, p. 68).

Specimens examined: about one hundred from different parts of the area. The most interesting records are as follows:

*North Caucasus*.—Piatigorsk, VIII.1927, 1 ♀.

*Semiretshye*.—The river Almaatinka, VII.1925, 1 ♂.

*Jakutia*.—Lancha, 30.VII.1926, 1 ♂ (Ivanov); Sjennikij, 18.VII.1926, 1 ♂; Aly, 2.VII.1926, 2 ♂♂, 1 ♀ (L. Bianchi); Solianka 21.VII.1902, 2 ♂♂ (Olenin).

*Russian Far East*.—Habarovsk, North Ussury region, 15.VII.1927, 1 ♀.

***Euthystira brachyptera intermedia* (Bol.)**

(Figs. 11-12.)

1897. *Chrysochraon brachypterus* var. *intermedia* Bolivar, Ann. Sc. Nat. Porto, iv, p. 224 [♂, ♀; Collsacabra, Spain].

Differs from typical form only by the features indicated in the key for subspecies (see above).

Although Bolivar described this form as «var.» of *E. brachyptera* it is evident that *intermedia* is a distinct subspecies; the shape of female elytra on which Bolivar based the separation of this form from typical *brachyptera* is variable in both subspecies and has no taxonomic value.

GEOGRAPHICAL DISTRIBUTION. — Known only from mountains of North Spain.

Eos, VIII, 1932.

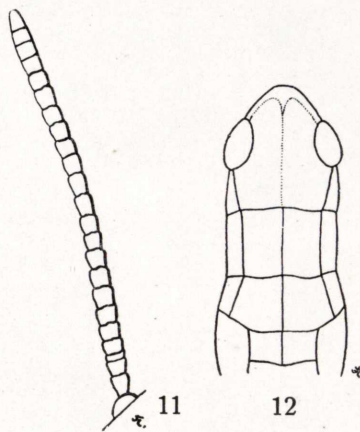


Fig. 11.—*Euthystira brachyptera intermedia* (Bol.). Left antenna of ♀ (type, Collsacabra, Spain);  $\times 5.5$ . Fig. 12.—*Euthystira brachyptera intermedia* (Bol.).—Dorsal view of the head and pronotum of ♀ (type, Collsacabra, Spain);  $\times 3$ .



Specimens examined, 2; 1 ♂, 1 ♀.

Collsacabra, Spain, 1 ♀ (type) and 1 ♂ (paratype) (Masferrer leg.) [Coll. I. Bolivar].

## V. Genus *Mongolotettix* Rehn.

1898. *Chrysochraon* Bolivar, Ann. Mus. Genova, xxxiv, p. 82 (nec Fischer).  
 1910. *Chrysochraon* Kirby, Syn. Cat. Orth., iii, p. 145 (partim).  
 1910. *Chrysochraon* Shiraki, Acrididen Japans, p. 15 (partim).  
 1914. *Chrysochraon* Uvarov, Ann. Mus. Zool. Acad. Sc. St. Pétersb., p. 168 (partim).  
 1921. *Chrysochraon* Caudell, Proc. Ent. Soc. Wash., xxii, 2, p. 32 (nec Fischer).  
 1928. *Mongolotettix* Rehn, Proc. Acad. Nat. Sc. Philad., p. 200.

Very slender. Antennae compressed, feebly dilated at the base in ♂ or ensiform in ♀ and strongly widened at the base. Fasti-

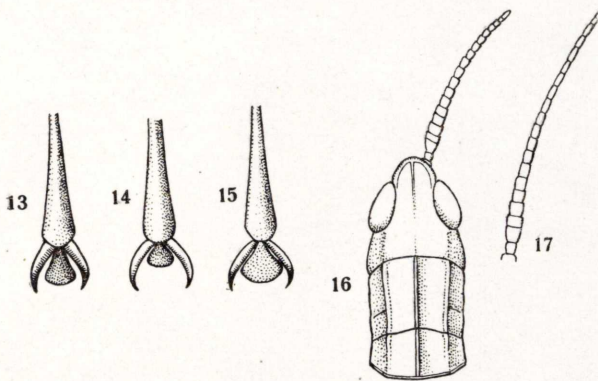


Fig. 13.—*Podismopsis* (*Eurasiobia* sbg. n.) *poppiusi* (Miram), dorsal view of the apex of hind tarsus of ♂;  $\times 10$ . Fig. 14.—*Podismopsis* (s. str.) *altaica* Zub., dorsal view of the apex of hind tarsus of ♂;  $\times 10$ . Fig. 15.—*Mongolotettix japonicus vittatus* (Uv.), dorsal view of the apex of hind tarsus of ♂;  $\times 10$ . Fig. 16.—*Mongolotettix japonicus vittatus* (Uv.), dorsal view of the head, antenna and pronotum of ♀ (from Troitzkosavsk, Transbaikalia);  $\times 3$ . Fig. 17.—*Mongolotettix japonicus japonicus* (Bol.), dorsal view of antenna of ♀ (from Kamen Rybolov, South Ussury region);  $\times 3$ .

gium of the vertex quite horizontal, with distinct median keel; foveolae absent; frontal ridge strongly sulcate in its greater part; supplementary facial carinae well developed. Face seen in profile strongly reclinate. Pronotum with narrow disc; lateral keels distinct but not sharp in prozona, very feeble or obliterated in metazona, practically parallel on their whole length; hind margin of the pronotum subtruncate or very fee-

bly rounded, never excised. Lateral lobes distinctly longer than broad. Elytra in ♂ inflated, narrow, not reaching the apex of hind



femora, obliquely emarginato-truncate at the apex; venation very regular, with quadrate or rectangular cells in areas; elytra in ♀ quite lateral, elongated-oval, moderately narrowing to the apex, but not acute or pointed, without preapical excision. Mesosternal interspace narrow, in ♂ elongated, in ♀ quadrate. Subgenital plate in ♂ strongly conically produced, narrow. Valvae of the ovipositor long, slender, not incurved; dorsal surfaces of the upper pair not sectorially excised. Hind femora slender, long; genicular lobes acutely angulated at the apex; hind metatarsus not longer than third tarsal joint; arolium strongly developed.

Genotype: *Chrysochraon japonicus* Bol. (by original designation).

This genus includes only three very similar forms, distributed in Siberia, Japan, Korea, Manchuria, Mongolia and China.

#### Key to species and subspecies.

- 1 (4). Mesosternal interspace in ♂ feebly elongated or subquadrate, ♀ quadrate. Body with more or less distinct longitudinal dark and light stripes.
- 2 (3). Larger. Antennae longer, in ♂ half again as long as, in ♀ distinctly longer than the head and pronotum taken together; median joints twice as long as broad. . . . . 1. **M. japonicus japonicus** (Bol.)
- 3 (2). Smaller. Antennae shorter, in ♂ less than half again, in ♀ as long, as the head and pronotum taken together; middle joints only half again as long as broad. . . . . 2. **M. japonicus vittatus** (Uv.)
- 4 (1). Mesosternal interspace in ♂ twice as long as broad. Body unicolorous. Female unknown (Body large, with relatively long and broad elytra). . . . . 3. **M. anomopterus** (Caudell).

#### 1. *Mongolotettix japonicus japonicus* (Bol.)

(Fig. 17.)

1898. *Chrysochraon japonicus* Bolivar, Ann. Mus. Civ. Stor. Nat. Genova, xxxiv, p. 82 [♂; Japan].
1910. *Chrysochraon japonicus* Shiraki, Acrid. Japans, pp. 16-17 [♂, ♀; Tokyo, Kumamoto and Sapporo, Japan].
1910. *Chrysochraon japonicus* Kirby, Syn. Cat. Orth., III, p. 147.
1911. *Chrysochraon japonicus* Ikonnikov, Ann. Mus. Zool. Acad. Sc. St. Pétersb., pp. 244-246 [Kamen-Rybolov, South Ussury region].



1913. *Chrysochraon japonicus* Ikonnikov, Über die von P. Schmidt aus Korea mitgebr. Acridiodeen, p. 13 [Korea].  
 1928. [*Mongolotettix*] *japonicus* Rehn, Proc. Acad. Nat. Sc. Philad., pp. 200-205, pl. XXII, figs. 9-14.

♂. Body very slender. Antennae half again as long as the head and pronotum taken together; middle joints twice as long as broad; fastigium of the vertex with rounded margins; frontal costa sulcate throughout. Pronotum with obliterate lateral keels in metazona; prozona not rugulose, metazona with distinct rugosities. Elytra practically reaching the anal plate, twice as broad as hind femora; mediastinal area practically reaching the middle part of anterior margin of elytra. Mesosternal interspace feebly elongated or subquadrate.

♀. Larger and more heavy. Antennae somewhat longer than head and pronotum taken together; their middle joints as in ♂; fastigium of the vertex very broadly rounded at the apex, with strongly incurved margins. Frontal ridge completely sulcate. Elytra with distinctly incurved radial veins; mediastinal area of subequal width.

Coloration brownish-olivaceous, greenish-olivaceous or reddish-olivaceous, with more or less distinct longitudinal dark and pale longitudinal stripes on the head and lateral lobes of the pronotum, especially in female sex; face unicolorly pale brown. Elytra in ♂ pellucid, shining as glass, with not darkened mediastinal area and with dark second radial vein; in ♀ with very distinct longitudinal whitish stripe. Hind femora without dark spots or stripes; lower and inner surfaces pale-yellow; hind tibiae and tarsus pale-yellow; apices of the spines black.

	♂♂	♀♀
Length of body.....	18 -22 mm.	24 -32 mm.
— of pronotum.....	3.5 —	4.8- 6 —
— of elytra.....	10.5-11 —	4.7- 5 —
— of hind femora.....	10.3-11 —	13 -17 —

GEOGRAPHICAL DISTRIBUTION.—This is an eastern subspecies occupying the whole of Japan Islands from the inseln Sikoku to Yezo, Korea, South Ussury region and the middle source of the river Amur.

Specimens examined, 8; 5 ♂♂, 3 ♀♀.



*Japan*.—Jumoto-Motohacone, Nippon, 18.VII.1917, 1 ♀ (Roshkovsky).

*South Ussury region*.—Kamen-Rybolov, 2 ♂♂, 1 ♀ [coll. Ikonnikov, n. 1811, 1812 and 1815]; Jakovlevka, 6.VIII.1926, 1 ♂ (N. Filipjev); Vinogradovka, 16-17.VII.1929, 1 ♂ (N. Filipjev and Djakonov).

*Amur district*.—Ventzelevskoye, VII.1926, 1 ♂, 1 ♀ (Pliater-Plohotzky). Specimens not quite typical resembling to *M. jap. vittatus*.

## 2. *Mongolotettix japonicus vittatus* (Uv.)

(Figs. 15 and 16.)

1914. *Chrysochraon vittatus* Uvarov, Ann. Mus. Zool. Acad. St. Pétersb., pp. 168-169 [♀; the river Tshikoi, Transbaikalia; Tshendjatun, prov. Mukden, Manchuria].
1916. *Chrysochraon vittatus* Pylnov, Rev. Russe d'Ent., xvi, pp. 276-277 [♂, ♀; the river Tshikoi, N. Mongolia].
1926. *Chrysochraon vittatus* Tarbinsky, La Défense des Plantes, iii, n. 2-3, p. 279 [Minusinsk, Central Siberia].
1928. [*Eogeacris*] *vittatus* Rehn, Proc. Acad. Nat. Sc. Philad., p. 200, footnote (incorrect reference of the species to the genus *Eogeacris*.)
1929. *Eogeacris vittatus* Bey-Bienko, Ann. Mag. Nat. Hist., Ser. 10, v, p. 496 [Station Hingan, Manchuria] (incorrect reference to the genus *Eogeacris*).

Very like in the structure, habitus and coloration to *M. japonicus* Bol. but differs from it in the following features. Body smaller. Antennae shorter, in ♂ less than half again as long as, in ♀ shorter than the head and pronotum taken together; middle joints only half again as long as broad. Pronotum with subobliterate but more or less distinct lateral keels in metazona; the later is scarcely rugulose in ♂ and feebly rugulose in ♀. Elytra in ♂ shorter and narrower, a little more than half again as broad as hind femora, reaching beyond the middle of hind femora but not extending to anal plate; elytra in ♀ not reaching hind margin of the second abdominal tergite.

	♂♂	♀♀
Length of body.....	17 -20 mm.	22 -30 mm.
— of pronotum.....	3 - 3.5 —	4.5- 5 —
— of elytra.....	7 - 9.5 —	3.8- 4.5 —
— of hind femora.....	8.8-10 —	11 -13 —



GEOGRAPHICAL DISTRIBUTION.—This is the western subspecies probably widely distributed in E. Siberia and adjacent regions, as it is known from Minusinsk, Central Siberia, and Transbaikalia to Northern Mongolia and Manchuria.

Although this form was referred to the genus *Eogeacris* (Rehn, loc. cit., p. 200), it is unquestionably a member of the genus *Mongolotettix* because it has the same generic features as the genotype, viz. *M. japonicus* (ensiform female antennae, subobliterate lateral keels of the pronotum in metazona, venation of elytra in ♂, structure of hind tarsus and others) and even represents only a western subspecies of the later; both subspecies are strongly similar to each other, especially in male sex and their exact determination is very difficult in the male sex; on the other hand they have very distinct areas of distribution.

Specimens examined, 30; 10 ♂♂, 20 ♀♀.

*Central Siberia*.—Minusinsk, VII.1926, 2 ♀♀ (V. Ivanova); the same locality, 14.VI.1924, 1 ♂, 2 ♀♀.

*Northern Mongolia*.—Tshoktai, the river Tshikoi, 20.VI.1915, 1 ♂ (Tomin).

*Transbaikalia*.—The river Tshikoi, VIII.1913, 1 ♀, type (S. Emeljanova) [coll. Zool. Mus. Acad. Sc. in Leningrad]; Ust-Urluk, river Tshikoi, 4.VII.1928, 5 ♂♂, 5 ♀♀ (Th. Lukjanovitsh); Troitzkosavsk, 1-3.VII.1928, 3 ♂♂, 5 ♀♀ (Th. Lukjanovitsh); Balsino, distr. Tshita, 28.VI.1927, 1 ♀ (Vulfson); Alexandrovskoye, 4.VIII.1927, 2 ♀♀ (Vulfson).

*Manchuria*.—Hingan, 5.VIII.1927, 1 ♀ (P. A. Pavlov); Guntshulin, South Kuantshen, VIII.1905, 1 ♀ (Serikov); Tshendjaton near Maimakai, 14.VI.1905, 1 ♀, paratype (Bortkevitsh leg.).

### 3. *Mongolotettix anomopterus* (Caudell).

1921. *Chrysochraon anomopterus* Caudell, Proc. Ent. Soc. Wash., xxiii, 2, p. 32, fig. 1 [♂; Mokanshan, China].

This species unquestionably belongs to the genus *Mongolotettix* judging by the original description and figure of the male elytra given by Caudell. All features indicated by this author for *M. anomopterus* not differ from the same in *M. japonicus* except the structure of me-



sosternal interspace (see key to species); this feature is probably characteristic for *M. anomopterus*. Mr. J. A. G. Rehn has also included this species in the genus *Mongolotettix* after examination of the single type specimen in the U. S. National Museum.

GEOGRAPHICAL DISTRIBUTION.—Known only from the type locality.

## VI. Genus *Chloëaltis* Harris.

- 1841. *Chloëaltis* Harris, Rep. Insects Mass. Injur. Veget., p. 148.
- 1873. *Chrysochraon* Thomas, Syn. Acrid. N. Amer., p. 74 (nec Fischer).
- 1897. *Chloëaltis* McNeill, Proc. Davenport Acad. Sc., vi, p. 227 (partim).
- 1910. *Chloëaltis* Kirby, Syn. Cat. Orthopt., iii, p. 126 (partim).
- 1928. *Chloëaltis* Rehn, Proc. Acad. Nat. Sc. Philad., p. 203.

According to Rehn (loc. cit., p. 203) this North American genus is represented by a single species, viz. *Ch. conspersa* Harris, genotype of *Chloëaltis*. It is strongly specialised and differs from all other genera of the group in remarkably dense venation of elytra.

### 1. *Chloëaltis conspersa* Harris.

- 1841. *Locusta* (*Chloëaltis*) *conspersa* Harris, Rep. Insects Mass. Injur. Veget., p. 149 [Massachusetts].
- 1910. *Chloëaltis conspersa* Kirby, Syn. Cat. Orthopt., iii, p. 126.
- 1928. *Chloëaltis conspersa* Rehn, Proc. Acad. Nat. Sc. Philad., pp. 203-204, pl. XXIII, figs. 9-10.

GEOGRAPHICAL DISTRIBUTION. — «From Southern Canada to the Mountains of North Carolina, and from Nova Scotia and New Jersey westward to the eastern foot hills of the Rocky Mountains in Alberta and Colorado» (Rehn).

Specimens examined, 7; 3 ♂♂ and 4 ♀♀.

*Michigan*.—Pequaming, 1 ♂, 2 ♀♀ (M. Hebard).

*British Columbia*.—Chilcotin, 17.VII.1920, 1 ♂ (E. R. Buckell).

*Maryland*.—Glen Echo, 10.VII.1914, 1 ♀.

*Massachusetts*.—Wellesley, 1 ♂, 1 ♀ (From A. P. Morse).



VII. Genus **Napaia** McNeill.

1897. *Napaia* McNeill, Proc. Davenport Acad. Nat. Sc., vi, p. 212.  
 1899. *Oeonomus* Scudder, Proc. Amer. Acad. Arts and Sc., xxxv, p. 47.  
 1910. *Napaia* Kirby, Syn. Cat. Orthopt., iii, p. 126.  
 1919. *Chloëaltis* Rehn and Hebard, Trans. Amer. Ent. Soc., xlv, pp. 82, 86-87 (partim).  
 1928. *Napaia* Rehn, Proc. Acad. Nat. Sc. Philad., p. 204.

Although this interesting N. American genus is characterised by presence of foveolae of the vertex its relation to the group *Chrysochraontes* is quite evident as shown by Rehn (loc. cit.)

The genus includes two species distributed along Pacific Coast of United States of America.

Genotype: *Napaia gracilis* McNeill (by monotypy).

1. **Napaia gracilis** McNeill.

1897. *Napaia gracilis* McNeill, Proc. Davenport Acad. Nat. Sc., vi, p. 213, pl. II, figs. 6, 6 a-d [Southwestern California].  
 1910. *Napaia gracilis* Kirby, Syn. Cat. Orthopt., p. 126.  
 1928. *Napaia gracilis* Rehn, Proc. Acad. Nat. Sc. Philad., p. 204, pl. XXIII, figs. 11-12.

GEOGRAPHICAL DISTRIBUTION.—Coast range of California and Mountains of Southern California.

Specimens examined, 2; 1 ♂, 1 ♀.

*California* U. S. A.—Mts. near Claremont, 1 ♂, 1 ♀ (Baker).  
 From M. Hebard.

2. **Napaia aspasma** (Rehn and Hebard).

1919. *Chloëaltis aspasma* Rehn and Hebard, Trans. Amer. Ent. Soc., xlv, pp. 82-86, figs. 1-3 [♂, ♀; Siskiyou Mountains, Oregon].  
 1928. [*Napaia*] *aspasma* Rehn, Proc. Acad. Nat. Sc. Philad., pp. 190, 204.

This interesting species, as show the figures and description by Rehn and Hebard, is more like *Podismopsis* than the precedent species.

GEOGRAPHICAL DISTRIBUTION.—Known only from the type locality on the North Pacific Coast of the United States.



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